

VIRGINIA

WILDLIFE

OCTOBER 1991

ONE DOLLAR



Editor's Page

A reporter from a large and prestigious newspaper called the office the other day. He was doing a story on our new Wildlife Conservationist license plate and he had a question.

"Just what is that bird on the plate?"

"A mallard," said my boss.

A pause.

"Is it endangered?"

We all got a big laugh at the reporter's expense over that, but we might as well have cried. Here we are, in the business of educating the public on the wonders of nature, and a bright, well-educated reporter from the nation's capital is as ignorant of the wildlife in his own backyard as most of the rest of us are about the workings of our local sewer systems.

So, what else is new? I've heard stories about city kids spending summers in the country and not knowing a cow or a pig when they saw one. My own sister embarrassed me terribly once when she looked at an asparagus plant in fruit and announced, "Aha, so that's where peas come from!"

It's hard to admit that many people do live quite blissfully without nature. For many folks, watching a sunrise from ridgetop may stir their emotions, but when it really comes down to stirring their souls, to the special moments they'd sacrifice time and money for, well, now that's something altogether different. Lots of folks may get more peace of mind listening to a singer belt out the blues in a smoky night-club than spending a cold winter day sitting on a deer stand trying to figure out how to keep their hands and feet from going numb.

We've been pretty pompous about the whole thing, you know. We sit here in our offices assuming everybody wants the same experiences we do, and all we have to do

is to give them the information and they will be "one of us." It's like expecting everyone to love green beans and turnips, certain that if they don't, it's just because the poor souls never tried them.

It's hard to admit that maybe some people just don't want to be out in the woods getting bug bitten, scratched up, and tired from walking all day in briars and swamps. It's just not something they care much about. Nevertheless, I wondered for the longest time how people can live without a conscience for wild things and do irresponsible things to the environment. I've always thought that if you just pointed out the harm they were doing, they would change. But, that's not the way it is. It just doesn't matter to many folks, for instance, that the canebrake rattlesnake is on the road to extinction in the state. In fact, I'll bet that most people are glad about it.

But I know better than to despair. After all, it's always tickled me to think how much my old roommate Terry hates birds. Terry quite frankly will tell you how much she loves to sleep, and seriously resents being woken up by the chattering of songbirds on bright spring mornings. The good thing about Terry, though, is that she's accommodating. Even though she would rather shop than go for a hike, or sit by a pool and sunbathe rather than go fishing, if she knows that something is really very important to someone she cares about, she does her best to respect somebody else's needs and desires.

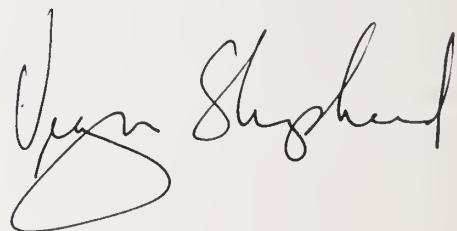
I fact I can remember the time that one of Terry's boyfriends had a snake his mother wouldn't let him keep at home. Now, Terry hates snakes worse than she does birds. Not only that, but she won't allow dogs in the house and allows cats in only if they never shed or throw up

on the carpet. So, it was a monumental surprise to us all when, without much fuss, Terry allowed the snake to be temporarily housed in our apartment. Scared to death, she locked her door each night so that if the snake got out of its cage, it wouldn't wind up in her bed.

Thus, I know that if by chance I sat down with Terry and told her how important keeping the land healthy for the songbirds and snakes and spiders is to me and the rest of us who cannot live without wild things or wild places, she would listen. She feels about as much for a snake or a bird as I feel for a moon rock, but nevertheless, she realizes that she is not the only one that matters.

I think perhaps that kind of attitude has something to do with respect and compassion and unselfishness and very little to do with ignorance or education. Terry will always curse birds and hate snakes, but I'm certain also that she will always show respect for the desires of others who might know a bit more than she about the workings of the Earth and compassion for those of us who need the wilderness more than she does.

It would be nice to believe that someday Terry will be as thoughtful toward wildlife as my friend Brenda is, who, while sunbathing at Cape Cod this summer, kept the homeless bees displaced by the hurricane at bay by offering them a can of Classic Coke. But, there's a limit to everything. Nevertheless, a little respect for others and a good dose of compassion goes a long way.



VIRGINIA WILDLIFE



photo by Bill Lea



What kind of hunting season can sportsmen look forward to this year? See p. 20 for our hunting forecast.

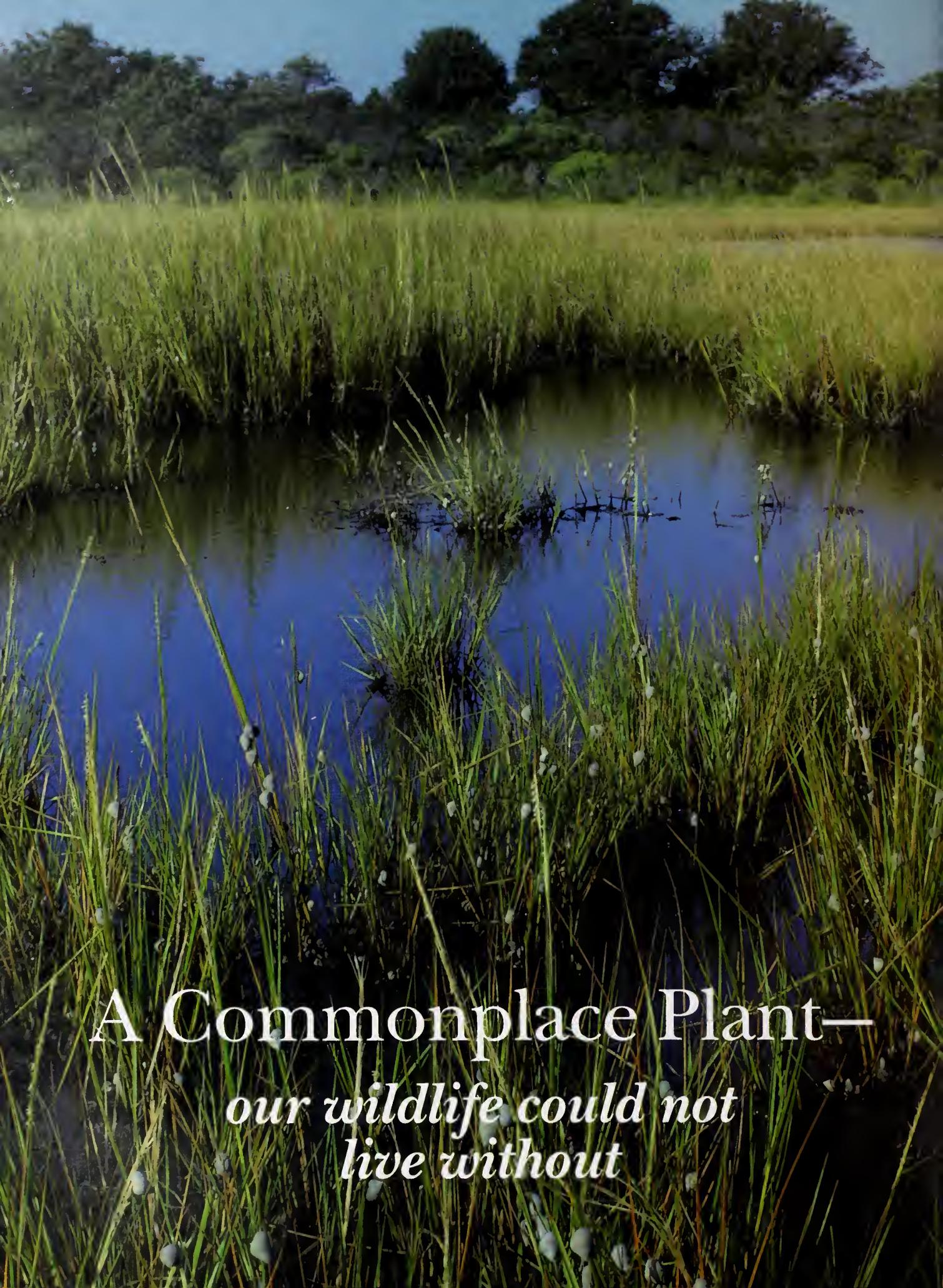
Cover: Scenes from a Virginia autumn; photo by Bill Lea.
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A Commonplace Plant—
*our wildlife could not
live without*

Spartina alterniflora is an unremarkable plant of our estuaries that accomplishes remarkable things. It is the grass of our salt marshes upon which all life depends.

by Curtis Badger

It's one of Virginia's most commonplace plants, found in the brackish marshes that line our rivers, and the salt marshes of the Chesapeake Bay and Atlantic coast. Yet, to most Virginians, the plant is a mystery, a slim, unremarkable grass whose merits are rarely noticed. Still, *Spartina alterniflora*, better known in most areas as smooth cordgrass, is remarkable. The vast *S. alterniflora*

marshes of the coast protect the mainland by absorbing the energy of flood waters, and by acting as giant sponges and filters, soaking up surface water and ridding it of contaminants before returning it to rivers and streams. But the most valuable gift of *S. alterniflora* deals with the complicated process of life and death, the synthesis of energy, and the mysterious chemical equation that balances the end of one life with the beginning of another.

It is no mean feat what this inconspicuous little plant accomplishes. In purely economical terms, its value to the Commonwealth can be measured in the millions of dollars, even though the annual crop is never actually harvested. In biological terms, *S. alterniflora* is the motherlode, the source and substance of the tremendously productive and diverse ecosystems we call estuaries. If *S. alterniflora* were a little showier, if it came from a more prestigious neighborhood than



Fiddler crabs eat detritus by picking up gobs of it with their claws, and then sorting out the digestible particles with the six legs which cover their mouths; photo by David Liebman.



Above: *Spartina alterniflora* is the main source of detritus that fuels the food web in the estuary, from fiddler crabs to green-backed herons;

Left: *Spartina alterniflora* with marsh periwinkles; photo by Susan M. Glascock.

a marsh, it might even be a good choice for the state flower. Although not much on style, the plant is long on substance.

S. alterniflora is the great energy factory that drives coastal salt marshes. Although *S. alterniflora* appears to be at its peak of production in summer, when it grows in thick, lush

stands, it begins making its most valuable contribution in fall and winter, when to our eyes it appears lifeless and wasted. It is then that the plant gradually collapses to the marsh floor and is eventually attacked by single-celled bacteria, which reduce the plant to smaller and smaller pieces.

The bits and pieces of *S. alterniflora* are washed from the marsh floor by tides and soon contribute to the nutrient-rich soup called detritus—a smorgasbord of bacteria, bits of cellulose from *S. alterniflora*, algae, free-floating eggs of fish, shellfish, and insects, larvae of various species, and many other forms of nutritious and not-so-nutritious matter. This broth, which reaches its culinary peak during the spring and summer, is eaten by protozoans which live in the shallow water, by filter-feeding burrowing worms, oysters, clams, a variety of mussels, nematodes, snails, insect larvae, fiddler crabs, and small fish such as menhaden and mullet, which either filter the detritus from the water or eat



Above: The opportunistic diamondback terrapin will eat snails and crustaceans found in the *Spartina alterniflora* of its environment; photo by Rob and Melissa Simpson.



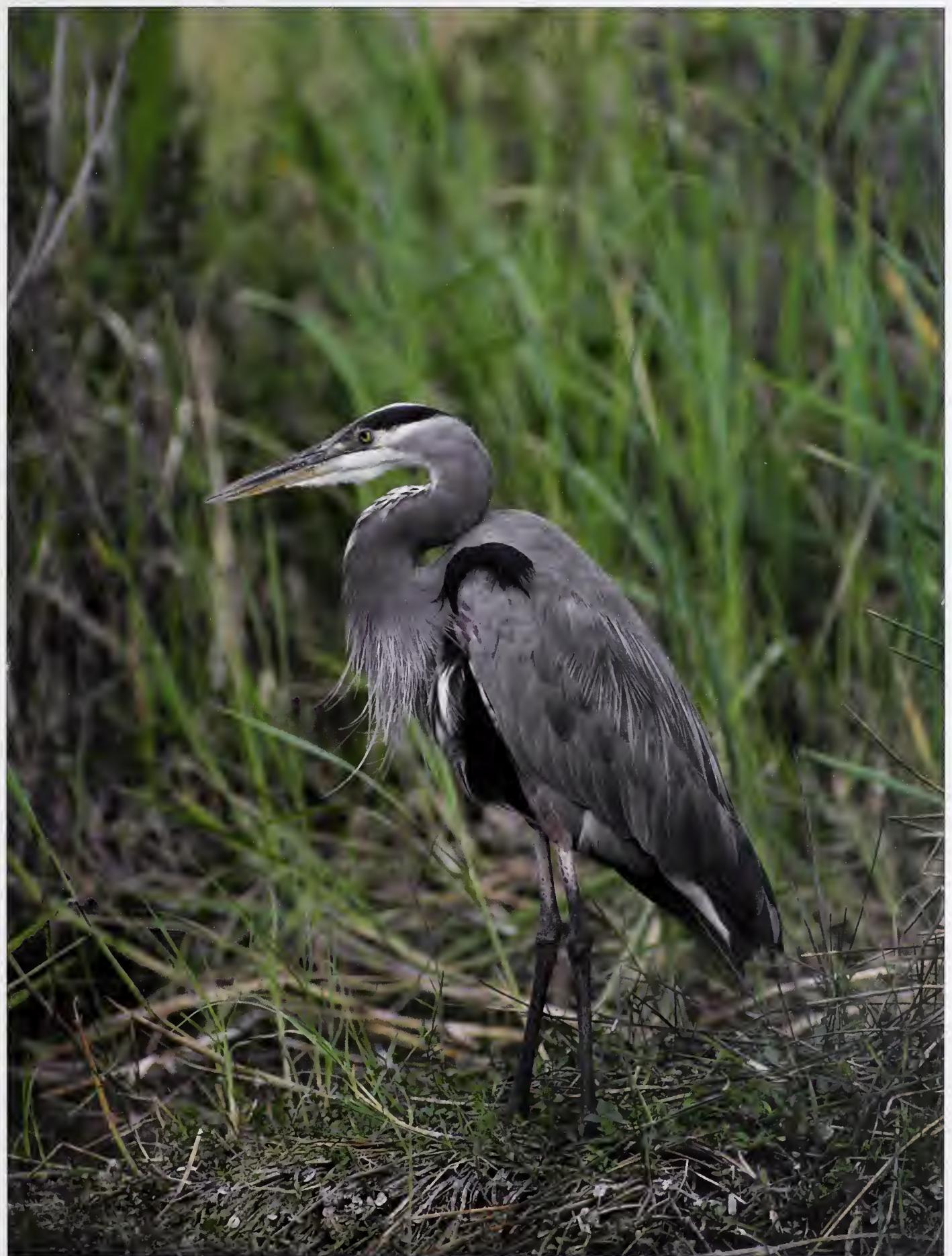
Ribbed mussels burrow into the mud and send up pairs of siphons, one of which pulls detritus-rich seawater through the digestive system, while the other expels non-digestible particles and waste; photo by David Liebman.

Right: The great blue heron, at home along shorelines, lakes and ponds in Virginia, is commonly found feeding on fish in a salt marsh, forming another link in the chain which begins with the plants of the tidal wetlands, like *Spartina alterniflora*; photo by Bill Lea.

it from bottom mud.

Clams burrow beneath the bottom and send up pairs of siphons, one of which pulls detritus-rich seawater through their digestive systems, while the other expels small non-digestible particles and waste. Most of the filter feeders which consume detritus do so in this manner, sucking the broth through hair-like cilia, through membranes, or through a mesh of mucous threads covering their gills.

Fiddler crabs eat detritus by picking up gobs of it with their claws, then sorting out the digestible particles with six specially adapted legs that cover their mouths. The tiny legs are shaped like paddles and are covered with stiff bristles which sort the large



particles of food from the small. The small particles are digested, but the larger pieces are temporarily stored in a pre-digestive chamber, and when they accumulate, are spit back into a claw and returned to the surface of the marsh.

The detritus eaters are preyed upon by animals higher on the food chain: larger fish, blue crabs, waterfowl, wading birds, raccoons and other mammals. A rail stalks the cordgrass marsh, spearing an unsuspecting periwinkle snail from a grass stem. A great blue heron waits patiently in a shallow gut, then surprises a passing killifish. An osprey circles over an open lake, dives, and comes up with a perch in its talons. A fisherman drifts in a small boat along a tidal creek, hoping to entice a flounder with an offering of squid and minnows.

The most remarkable thing about *S. alterniflora* is its almost magical ability to adapt to its surroundings. On the Atlantic coast, where sea water contains a level of thirty to thirty-five parts per thousand of salt, the healthiest stands of *S. alterniflora* are found along the very edges of creeks and bays, where salt water covers the lower stems and leaves at each high tide. While in fresh and brackish marshes, *S. alterniflora* has numerous competitors—black needlerush, pickerel weed, cattail, mallow—in the salt marsh it has the world nearly to itself. *S. alterniflora* is one of the special plants that has evolved mechanisms to enable it to thrive in an environment that would be deadly to other plants.

If the plants found in fresh water were to find themselves in salt water, their lives would literally be sucked away. Through the process of osmosis, nature attempts to balance the concentration of particles suspended in water by moving a less concentrated solution through a membrane to a more concentrated one. If a freshwater plant suddenly found itself in salt water, the water contained in the plant's cells would be drawn through

the plant's membranes toward the more concentrated salt water until the concentrations became equal. In a very brief time, the fresh water contained in the plant would be removed, and the plant would die.

S. alterniflora has solved this problem by allowing a certain amount of salt to enter its cells, bringing the salt content of water within the plant to a slightly higher concen-



Spartina alterniflora is best identified when in flower, when it is easier to distinguish from its close grass relatives; photo by Susan M. Glascock.

tration than that of the surrounding sea water. In this manner, the osmotic pressure is reversed; instead of fresh water moving away from the plant cells, sea water attempts to enter, inflating the plant cells and giving them strength and resiliency.

S. alterniflora must overcome yet another problem. It lives in a physically demanding environment with no windbreaks, so the breezes bend the slender stems at will. During storms, waves break across the marsh, sending tons of water crashing upon the shafts of *S. alterniflora*, and even

on normal days the currents constantly bend the grasses and scour the soil that provides their footing.

So, *S. alterniflora* must first of all be solidly anchored, which it does by sending tough rhizomes through the soil, interlocking root systems with other plants, finding strength not as individuals, but as colonies of plants which survive or perish together.

And the shafts of the plants must be resilient and tough, willing to bend but reluctant to break. *S. alterniflora* accomplishes this in the same way it survives in salt water. By adjusting its osmotic pressure so its cells are always fully inflated, the plant functions like a tire innertube, able to withstand great shock before puncturing. And the thin column of water contained in the xylem, drawn constantly through the roots by evaporation taking place on the leaves, helps make the plant flexible, but extremely strong.

S. alterniflora is a wonder of chemistry, physics, and structural engineering. But, more importantly, *S. alterniflora* along with the rest of the wondrous plants native to our tidal wetlands, contributes to the production of detritus, provides a buffer against erosion and flooding, acts as a filter for water quality control, and provides a home for wildlife—from nesting to nursery areas to resting places for species from shellfish to waterfowl.

Still, with our insistence on the development of tidal areas and the pollution of watersheds, our tidal wetlands are fast becoming our most precious and rare habitats. Their loss means species like our egrets, our black ducks, and even our sea turtles have an uncertain future. With our knowing destruction of these places we have gambled with their lives. Perhaps it is time the tide turned, and we, like *S. alterniflora*, became givers of life in the rare and wonderful world of a wetland. □

Curtis Badger is a freelance writer living on the Eastern Shore and is a frequent contributor to Virginia Wildlife.



Notes From Red Lick

*Here is a tale of a place which carries
the memories of a family still connected
by the tradition of hunting, and a man
who is passing it on.*

by Bill Cochran

Just up the ridge a couple hundred yards or so from my deer stand is the old home place where my great-great grandfather, on my mother's side, built his home and reared a family of 10. There isn't anything there now but a heap of foundation stones, and you have to peer closely to see them through blackberry tangles that run wild on the hillsides, like the kids who once played there.

On the south slope is a rambo apple tree, gnarled with age and nearing the end of its existence, bear claws in its bark. Most likely it was planted with loving care by the same hardened hands that hewed logs for the cabin, that stacked rocks picked from the new ground, that sent rail fences of chestnut zig-zagging along irregular boundaries, that dug graves in a little plot a heavy walk down a north-facing knoll from the house.

I like to pause in the graveyard, to scrape away the lichen from the stones and read a history of harshness of the mountain life. There, beneath the shroud of sugar maple trees, is the tale of the sad summer of 1864 when there were far too many trips to this spot: a 6-year-old buried August 26; a 5-year-old September 1; a 1-year-old September 7. Typhoid, most likely.

No hunt ever should be so intense that it does not allow time for reflection in such a setting. Who better than a hunter should know that life is but a vapor appearing for a little while, then vanishing? To view the homesite of pioneer mountain stock is to see human drama up close, and maybe even catch the glimpse of a buck.

I have a picture of my great-great granddad John. He is seated with a book in his lap. He has deep, piercing eyes and a long, white beard. To his left stands his wife, her best dress too tightly girdled for easy sitting, her hand stiffly on his shoulder, just as the photographer must have put it there. I have that picture and I have his land, my

name being the last recorded on the deed filed at the county courthouse. So when deer season comes, there is a certain prejudice for me to hunt here, the deer, perhaps, a symbol of something deeper that I seek.

Ownership of family land is a fleeting thing, a baton thrust into your hand that you run with for a brief period, hoping to do well, to carry on the

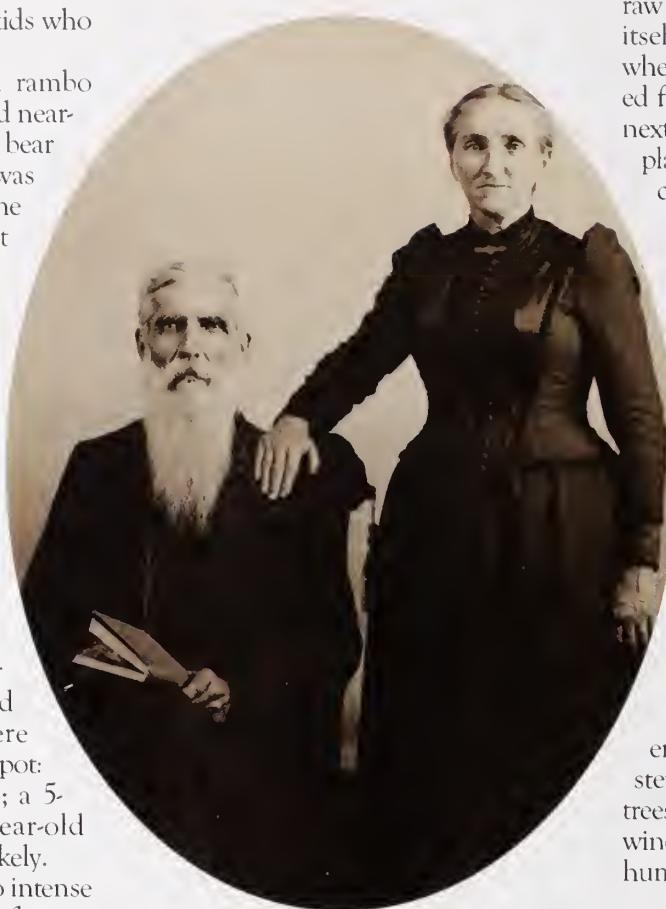
John's era. Then, after the turn of the century they virtually were depleted and stayed that way until modern game laws and management resurrected them. Ours is a generation blessed with deer, just as John's was. These, too, are the good old days for hunters.

Sometimes these times are too good when I examine my white pine plantation and see the terminal shoots nibbled away, and see the bark horned raw and bleeding by a buck ridding itself of itchy velvet. A decade ago, when the land became ours, we planted fruit trees, then replanted them the next spring after they disappeared and planted them still a third time in wire cages. Then gave up. We were learning whose place this really belongs to.

We don't live here. I wish I did, but livings aren't made on mountain farms much anymore. They more likely are made in offices in the city where the only decent view from a desk is the Sportsman's Calendar, and where some days you can't escape wearing a tie. We live too far away from the farm to raise cattle or to cultivate row crops. So we operate the property as a certified Tree Farm, one of around 75,000 across the country, where there is emphasis on conservation and land stewardship and where things like trees, wildlife, open space, sky, rocks, winds, cold, sun, rain, gun dogs and hunting are held in high esteem.

Come fall, hunting from a tree stand offers an ideal perch from which to survey my kingdom. When the afternoon sun, bright but with little heat, bathes the round-shouldered ridge where I watch, I get to thinking about Grandpa John, who brought this land into the family in 1838. He paid for it with "50 venison saddles," so the county history says.

He was a noted marksman, with 1,200 to 1,500 deer to his credit, and an unlisted number of bears, panthers, wildcats, turkeys and lesser game. Coming off the mountain one day following an unsuccessful hunt, I told my son, a youngster at the time, about the prowess of his old grandpa. The boy



Great-great grandpa John Barlow and his wife Martha.

tradition, to pass it on down the line, maybe a little better than how you received it. Few things remind you more of your fallibility than thumbing through the pages of family history to determine who made that dash before you, then pondering who will make it after you.

The deer population has come back nicely here on Red Lick Mountain. Like most places in the Alleghenies and the Blue Ridge, herds were thick during great-great granddad

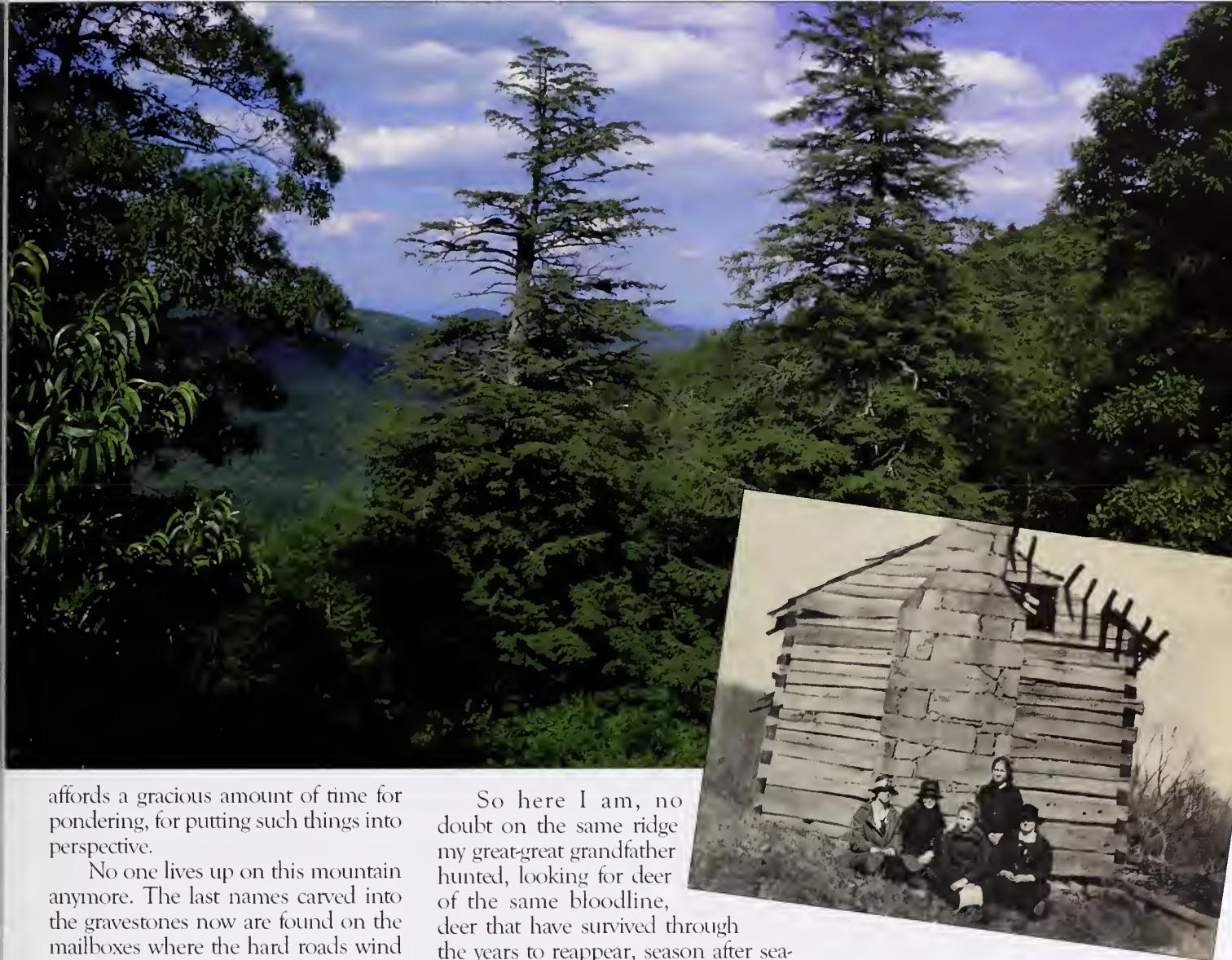
said nothing for a few strides, then responded: "No wonder we couldn't find anything." Records also reveal that Grandpa was a devout family man, a man of prayer, and he lived in an era when no one questioned the fact that it is possible to be a gentleman and gentleman as well as a hunter. A deer stand

rifles and space travel.

Though generations apart, we share something more than just this chunk of mountain land. Our genes pulsate with the drive to hunt. That impulse skipped several generations to reappear in me, becoming obvious in my youth.

hear a rustle and he is there, the very place you checked moments before and saw nothing.

It is amazing how a 120-pound animal suddenly can energize the entire landscape. You preach that there is more to the woods than a white-tailed deer, and more to hunting than squeez-



affords a gracious amount of time for pondering, for putting such things into perspective.

No one lives up on this mountain anymore. The last names carved into the gravestones now are found on the mailboxes where the hard roads wind ribbon-like through the distant lowlands. When the people left, the deer reclaimed it, if, indeed, they ever really gave it up. Some days when the cold is seeping through the seams of my hunting coat and my feet have become cakes of ice, I attempt to forget my personal misery by reflecting on Grandpa John's days, an era void of jet planes, four-wheel drives, interstate highways, nuclear missiles, television, scoped

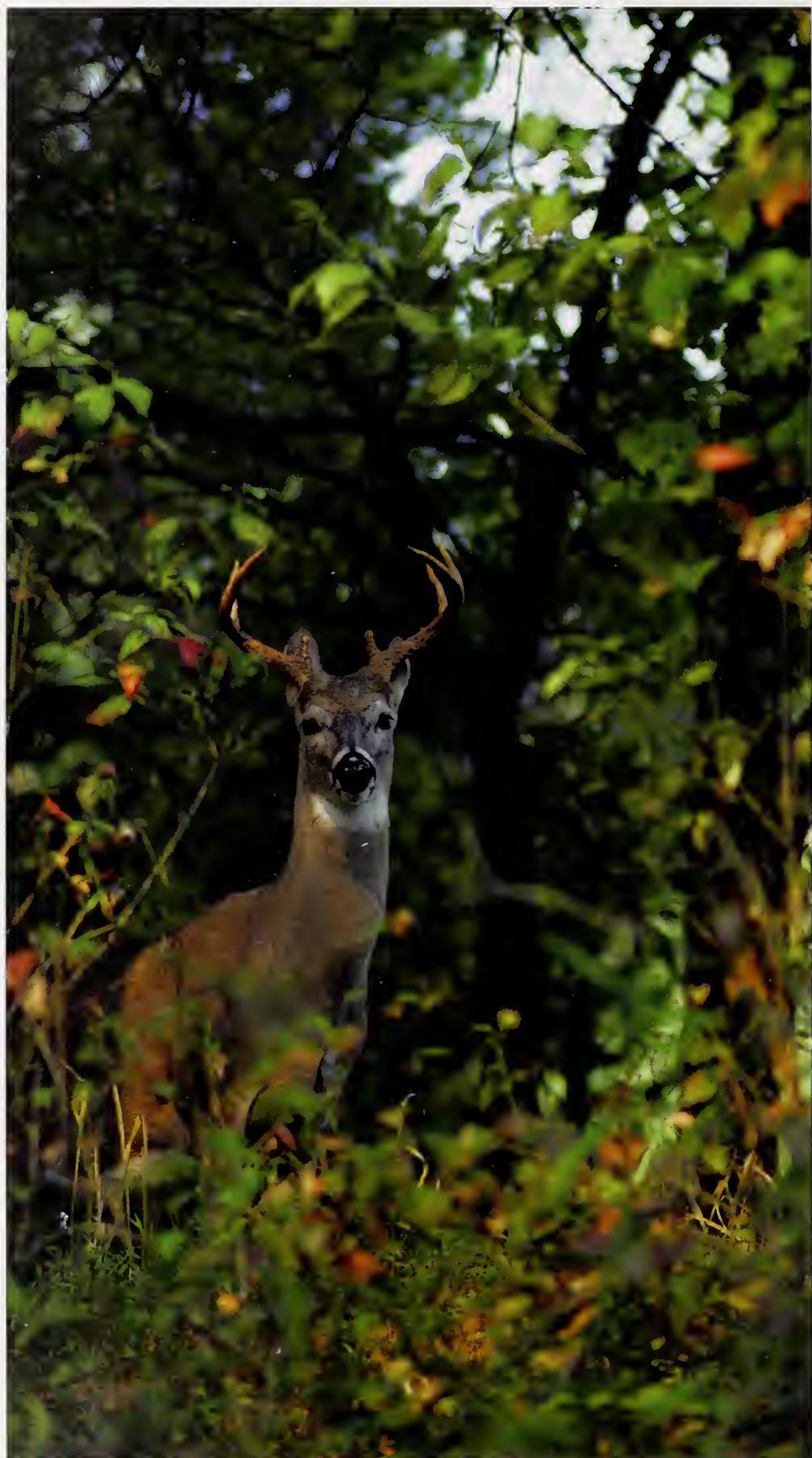
So here I am, no doubt on the same ridge my great-great grandfather hunted, looking for deer of the same bloodline, deer that have survived through the years to reappear, season after season, sleek and graceful, smart and fleet-footed. And one is coming my way!

Deer hunting is an exercise in extremes. For hours, seemingly nothing is happening, then within the wink of an eye so much is taking place you really don't have time to think it through, and you let galloping instincts take over. Where there once were empty woods now stands a deer. You do not see him approach, you simply

"Ownership of family land is a fleeting thing, a baton thrust into your hand that you run with for a brief period..."

Above: photo by Rob and Melissa Simpson. Inset: The family house on Red Lick in the early 1900s.

ing the trigger on game, and there is. But here, with antlers shining in the final, slanted rays of the sun, stands the reason for being afield this day.



A granddaddy buck he is not, but I feel certain that big antlers weren't all that important to Grandpa John, nor were they to me at the moment. I raise the rifle to my eye. My skin tightens, my breath comes in gulps, my heart pounds until it become the loudest sound in the forest.

The deer holds his head high, his eyes peering, his nostrils testing the breeze, his ears up and spread wide like satellite dishes poised for the first sound that will send him crashing through the brush on hooves that clatter against rocks.

Before long, I am standing over him with intermingling feelings of pride and remorse. I am reaching for my knife to cut into steaming flesh, yet I do not perceive myself as a relic of the 1800s, as some might. I do ponder how Grandpa John had felt on such occasions, because he had so many more of them than I'll ever have.

With darkness gathering in the hollows below me ready to come charging up the ridge, I quickly field dress the buck, hoping the killing had never become routine for Grandpa John. I doubt it ever had, even though he hunted to stay alive and I hunt for the joy of living.

When he was in his 80s, troubled by the infirmities of age, his family gathered around him, asking if he would like to live his life over. Our family history records his answer: "I have no wish to live my life over again, but there is one thing I would like to do, and that is to have one more good . . . hunt on Red Lick Mountain."

Maybe I'd had that for him. □

Bill Cochran is the outdoor editor of the Roanoke Times & World-News.

Left: "So, when deer season comes, there is a certain prejudice for me to hunt here, the deer, perhaps, a symbol of something deeper that I seek." Photo by Garry Walter.

photo by Lloyd B. Hill



Squirrels of the Season

by Bob Gooch



photo by Rob Simpson

Hunting squirrels in October is a new experience for many hunters around the Old Dominion. Here are some tips to help you hunt the new season this year.

Funny. I didn't plan it that way when I set this July day aside to write about October squirrels. But it's an appropriate one—cool, rain and drizzle, and the wind out of the Northeast sending ominous clouds scudding across a darkened sky. No dawns or sunsets today, no scorching heat, no blazing sun.

Not a typical July day.

But it serves a purpose here. Takes me back across half a century when late August or early September storms blew out of the Northeast, to temporarily cool the heat-weary land and wet down the hardwoods.

Time for early squirrels! September brought squirrel hunting to much of Virginia then. "Cutting time!" "They're cutting hickory nuts," was the signal that it was time to reach for the old squirrel piece, and head for the hardwoods. You could depend on

those late summer storms. They usually lasted for three days, and kept the little critters moving all day. A hunter could move quietly in those wet woods. It was a fine time to hunt squirrels. Besides, corn was ripening on the stalks and good populations of bushytails often raided ripe cornfields. Farmers needed help.

I look back with unrelenting nostalgia on those distant days. The hunting was fun, and today the memories are sweet. We hunted initially with an old single-barrel shotgun with a 30-inch barrel and the kick of a mule. We kids learned to level on an unsuspecting squirrel, close our eyes, clench our teeth, hit the trigger, and suffer the consequences. But not once did the punishment that old gun could dish out discourage us. Sometimes we were allowed to carry our father's fine side-by-side bird gun, but eventually with the meager profits from a schoolboy trapline, I was able to buy a cheap single-shot .22 rifle with crude open sights. That little rifle produced most of the memories I treasure to this day.

No single hunt stands out. There were too many successful ones. Instead there are mingled memories of cool dawns, delightful sunsets, and nut fragments sprinkling down through the leaves of a big hickory. "There's a squirrel up there cutting nuts—if I can just find him before he sees me." Sure there were mosquitos and ticks and an occasional squirrel loaded with "wolves" or botflies that buried beneath the skin and created unsightly sores. We had trouble with those squirrels, even though I know today they didn't harm the delicious meat. Then I had my doubts.

I've lived for years on those memories—through good hunting years and poor ones. They're right up there with the best of them—my first white-tailed deer, first turkey, elk hunts in Colorado, bear and caribou in Canada, wild boar in Florida and Hawaii, and—yes, capturing a couple of defiant Japanese soldiers while leading a Marine patrol in the Pacific in World War II.

College, military service, and then economic struggles typical of

young people getting started in the world kept me away from those Virginia squirrel woods longer than I had planned. And when I finally got back to the scenes of my boyhood hunts, things had changed. Don't they always? In my absence, the turkey hunters in many Virginia counties had been successful in eliminating early squirrel seasons. Their unfounded fear was that squirrel hunters would shoot turkeys before their November season opened. In other parts of Virginia, however, squirrel hunters were successful in protecting their hunting by legislative acts. The result was a hodgepodge of early squirrel seasons that seemed to be continuously opening and closing from the first of September through the middle of October. Ironically, many biologists and hunters felt the October closing date should rightfully



October squirrel hunting means finding hickory trees still loaded with nuts and a forest floor littered with nut fragments—and then taking a stand and waiting, photo inset by Pels.

be the opening date for squirrel hunting, and that was years ago.

I never got completely away from squirrel hunting, but mostly it was limited to the late fall and winter hunting, generally the only squirrel hunting open in much of Virginia. Oh, there were occasional trips to counties where there were two-week early seasons, but with the early season long a thing of the past in my home county, it was not the same hunting I had known as a skinny youth.



photo by Rob Simpson

But then the Department of Game and Inland Fisheries made a bold move. Biologists have long talked about opening the squirrel season in October—along with an opening on grouse and rabbits. And finally, thanks to a wise move on the part of the 1988 session of the General Assembly which restored season-setting authority to the Department, the wildlife managers were in a position to make that move.

"While late winter and late summer are the major breeding periods

for squirrels, there is actually some breeding just about every month of the year," one wildlife manager said. "We could probably hunt them just about all year, but the mothers are still feeding their young from the summer brood in September and early October. You hate to rob the young of their mothers too early."

There's also the problem of botflies, or "wolves" as they are commonly called. They are gone by the middle of October. They don't damage the squirrels, but the unsightly sores

cause too many hunters to discard them, a waste of a valuable resource.

So we come to the middle of October as the correct time to hunt squirrels—and also grouse and rabbits. "The populations for all are at their peak of abundance then, and hunters should have the opportunity to hunt them before the winter die-off begins," said Bob Duncan, wildlife division chief. A good bit of research on the part of Duncan and his staff supported that position during the 1991 Department public hearings in which hunting regulations were set for the 1991-92 and 1992-93 seasons.

The Department biologists were able to prevail with respect to squirrels, but strong hunter opposition caused them to withdraw the grouse and rabbit proposals.

So, for the first time in the memories of most hunters, the 1991-92 squirrel season will open the second Saturday in October. That's October 12 this year, close enough to the middle of October for biological reasons.

There is an exception. In the counties of Bedford, Bland, Botetourt, Brunswick, Buchanan, Campbell, Carroll, Charlotte, Craig, Dickenson, Dinwiddie, Floyd, Franklin, Giles, Grayson, Greensville, Halifax, Henry, Lee, Lunenburg, Mecklenburg, Montgomery, Nottoway, Patrick, Pittsylvania, Pulaski, Roanoke, Russell, Scott, Smyth, Southampton, Tazewell, Washington, Wise, and Wythe, the season will open on the first Saturday in September, or September 7 in 1991.

"That's a concession to hunters in those counties where there is a long tradition of September squirrel hunting," said Duncan.

Squirrel hunting ends statewide on January 31 as in previous years.

This is squirrel hunting in Virginia as the 1991-92 seasons unfold. Except for a few military areas, there are no other squirrel seasons in Virginia. All of the old legislative seasons have been finally wiped from the slate. Squirrel hunting and squirrel management in Virginia is finally in the hands of professional wildlife managers, something serious hunters have wanted for years.

So what does all of these resetting of seasons mean to squirrel hunters? Undoubtedly, the fact that squirrels can now be hunted for the final two or three weeks in October is the major break with the past. Have you ever hunted squirrels in late October—or do you know anyone who has? Probably not, unless you go out of state. October squirrel hunting has been popular in many other states for years, but few people go out of state for squirrels.

Some adjustments in hunting methods will be called for. Late October could well be called the “in-between-squirrel season,” a season that retains a bit of the early-season hunting and also some of the fall and winter hunting most hunters have become more accustomed to—of necessity.

Early hunting, September hunting, when the “squirrels are cutting,” means mostly taking a stand at a good nut tree and simply waiting. Ideally, some scouting to locate nut trees where the critters are feeding should precede the hunt. If there isn’t time for scouting, simply move about the woods until you find a tree and then take your stand. You may chase some animals from the tree initially, but wait quietly, and they will return—or other squirrels, unaware of your presence, will visit the tree.

Hickory nuts are particularly popular early in the season, and an active tree can be quickly determined by studying the forest floor beneath it. It will be littered with nut fragments. If it’s a tall one, and you haven’t made too much noise, you might even see or hear nut fragments drifting down through the foliage. If you do, take a stand and wait the critter out. Sooner or later it will reveal itself and offer a shot.

Camouflage clothing wasn’t available during my early hunting years. It was a product of World War II, but it can be a blessing for the squirrel hunter, particularly early before the deer season brings blaze orange to the

squirrel woods. Dress in camouflage, back up against a big oak tree trunk, and you’ll see some squirrels. For protection you might want to tie a sash of blaze orange cloth around the tree trunk just above your head. It proba-



Learning to adjust your hunting techniques to suit the new squirrel season means learning where the nut-producing trees are, like the hickories, and where the squirrels are feeding; photo by Lloyd B. Hill.

bly won’t disturb the squirrels.

The mild report of the little .22 cartridge doesn’t seem to bother squirrels. I’ve shot and missed and the animal didn’t move, giving me time for a second shot. Moving from your stand, however, can be disturbing. For that reason I don’t retrieve squirrels as they drop to the ground. Instead, I mark them carefully to be picked up when I leave. On good days I’ve taken limits from a big hickory tree without leaving my stand.

Squirrels move about a lot during the early season and sometimes stalking or still-hunting can be good. That’s why I loved those rainy fall days when the woods were wet and I could move quietly. If you’re hunting strange woods, you can still-hunt un-

til you find a feeding tree, and then take a stand. Still-hunting for squirrels can be a real challenge and excellent practice for hunting deer and other big game.

Depending upon the mast crop, season, and weather, waiting at a nut tree should still be productive early in the new October season, at least the early part of it.

Toward the end of October, winter hunting tactics could be more productive. Because of the seasons, which for years have generally deprived me of early-season squirrel hunting, I’ve become a winter squirrel hunter. Stalking is still good then and a wet forest floor helps, but instead of nut trees I’ve switched to waiting at den trees late in the day and sometimes at dawn. Locate an active den tree by studying the den entrances for wear and squirrel hair and take a stand as you would for hunting nut trees. You’ll take most of your game as it returns to the den at the end of the day.

Late October offers transition hunting. Feeding in nut trees is beginning to fade, and the den trees start to offer better hunting. But still-hunting can be good in either season. My experience tells me squirrels are more active throughout the day in early

November than they are after the bitter winter sets in. They should be even more active in late October—and at their annual peak of abundance. That too is a major advantage of the new October hunting.

I had a visitor the other day, one who called earlier and said he would like to stop by for an hour. We got to talking about squirrel hunting, however, and the visit stretched to over two. Squirrel hunting can do that to even seasoned hunters, and with this new approach to seasons, October could become the most popular time to hunt one of Virginia’s most popular game animals. □

Bob Gooch is an outdoor newspaper columnist and author of several books on hunting and fishing. He lives in Troy near Charlottesville.

A Whale of a Story

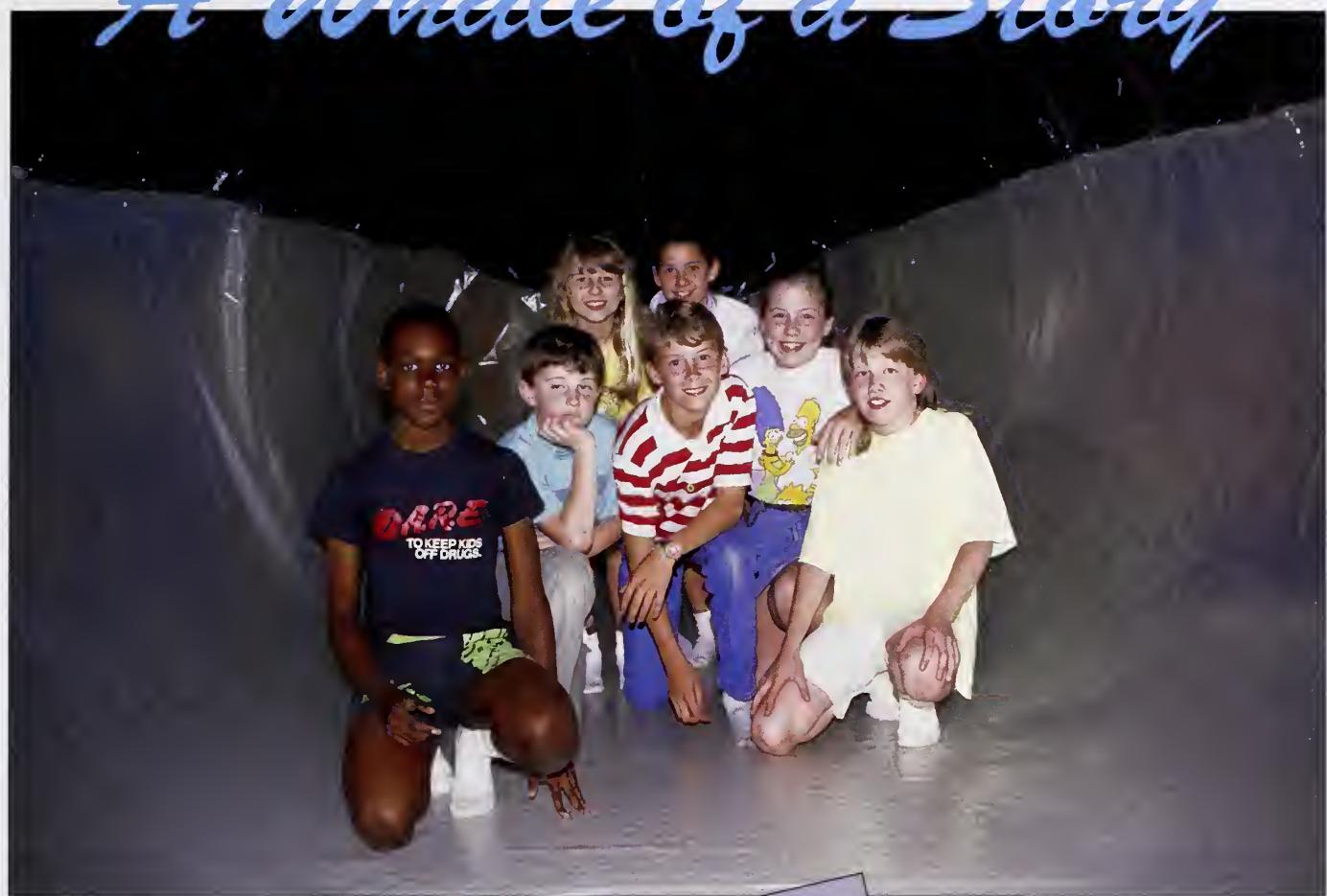


photo by Sarah White

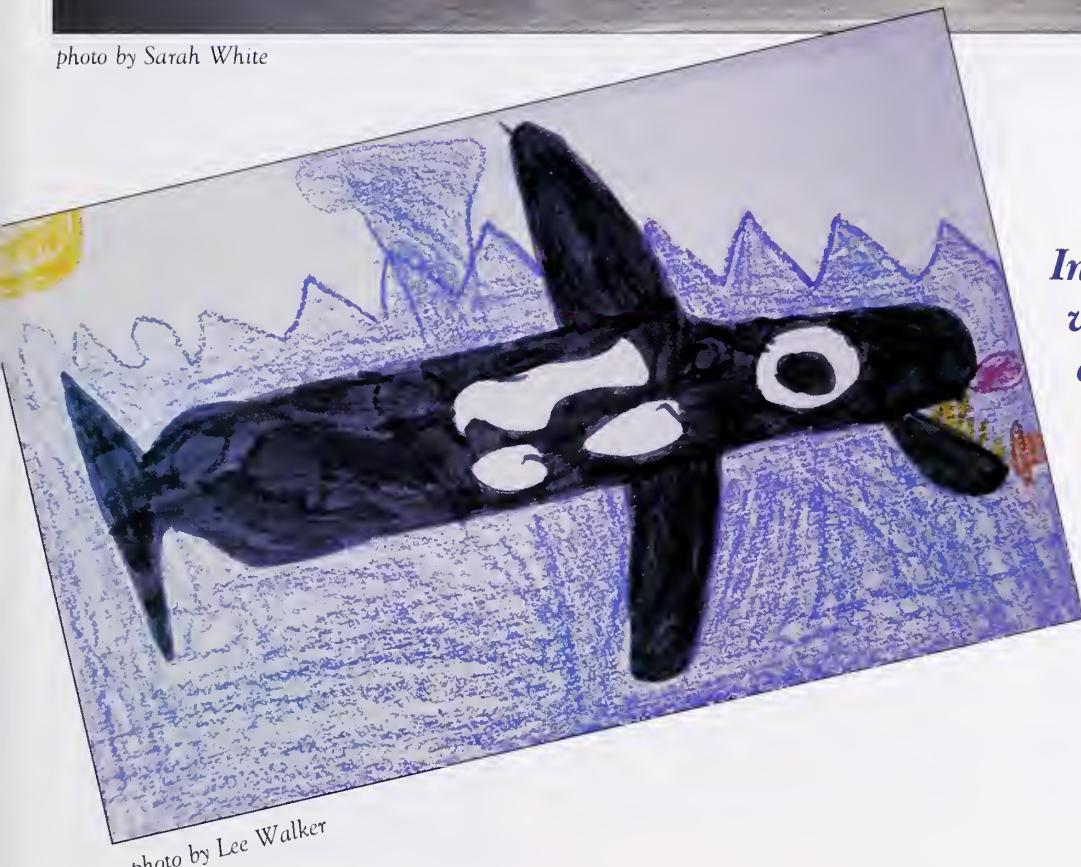


photo by Lee Walker

by Sarah White

In the beginning, there was black plastic and children scurrying for tape and scissors. In the end, there was “Bensley” the blue whale, and a lesson never to be forgotten.



together to form a loose bag that now lies crumpled and empty, waiting for resuscitation by the firemen who will arrive shortly to fill it full of air. But now, the whale is being ministered to by children, children measuring and marking, children cutting and taping, children running back and forth fetching tape and scissors. Along the broad cen-

vide schoolchildren of all ages with information about wildlife and, more importantly, to get them interested in its conservation. When Phil came to Suzie with his request, she thought immediately of the plans she had received from the Needham Science Center in Massachusetts, plans for building a life-sized, three-dimensional model of a blue whale.

Building a whale would be a complicated, labor-intensive task, but the Department of Game and Inland Fish-

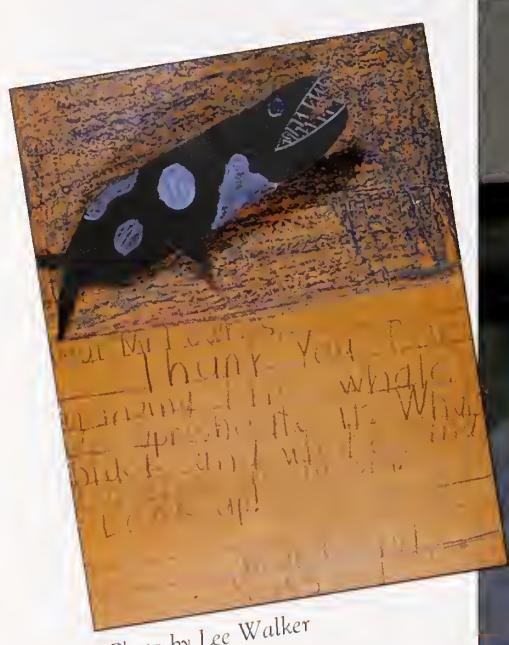


Photo by Lee Walker



They are building a whale. The children of Chesterfield County's Bensley Elementary School have gathered in the gym. All around them are signs that preparation has been made for something special. The huge clay-colored kickballs and scuffed white volleyballs have been gathered into nets and sit in a corner like sacks of potatoes; over these sacks the jump ropes fall in streams of yellow, orange and red. All has been made ready for the imminent birth of a whale.

The whale takes up almost all of the gymnasium floor. Of course it does not look like a whale, it looks like what it is: 240 feet of plastic cut and taped

ter of the bag a man walks with a mop; the plastic had been stored outside and it has rained the night before.

The man with the mop is Phil Lownes, assistant chief for the Game Department's Lands and Engineering Division. Phil's son Matt, an animated second-grader, had been studying whales in school. Now, whales are an inherently interesting subject, but when taught by a passionate whale watcher like second-grade teacher Mrs. Genter, they become fascinating and Matt, in his father's words "went wild." In search of more material on whales, Phil went to see Suzie Gilley, the coordinator of Project Wild, a Game Department program designed to pro-

Above: The children of Bensley Elementary School in Chesterfield County spent four hours measuring, cutting, taping, and finally inflating their creation—"Bensley" the blue whale.

Right: From an introduction on whales to the kindergarten class, to the construction, inflation and final tour through "Bensley," every grade of Bensley Elementary School participated in the creation of the life-sized replica of a blue whale; photos by Sarah White.



eries offered to foot the expenses of building the whale, and to send Phil Lownes and Suzie Gilley along to supervise the project. The entire school pledged their support, and "Bensley," as the whale came to be called, was well on his way to becoming real.

Phil purchased 2 rolls of strong, thick plastic and brought them home. Soon his backyard, covered in black and crisscrossed with strings, resembled the playing field for some outlandish, alien game. With the help of Matt's classmates and their parents, the measuring and cutting went quickly and the pieces were gathered up and brought to the school for the children to put together.

The smaller ones got the job of assembling the flippers, to be joined to the main body in the final stages of construction. The desks were pushed back and the plastic spread out on the classroom floor; then the children kicked off their shoes and spent the morning taping and measuring.

The older kids pieced together the main body of the whale in the gym, joining the black plastic which formed Bensley's back with the clear plastic which formed his underside. By 2 o'clock, Bensley had been taped, trimmed and turned rightside-out; stretching from one end of the gym to the other, he needed only to be inflated.

As the firemen arrived, Phil put down his mop to help them set up their

equipment. At first the children seem more impressed with these men in blue uniforms and the huge fans they have brought than with the enormous, rumpled sack on the floor. But suddenly, as the flukes are held open and the fans turned on, the whale's back is lifted in waves like a sheet on a clothesline picked up by a sudden wind.

In wild delight, the children began running around and around their creation now dwarfing them. This ecstasy becomes caution, almost apprehension as the children are gathered into groups and slowly beckoned into the whale. All but the smallest must duck as they go through its tail, but as they enter its back they can stand, and the midsection is probably more spacious than most of their own bedrooms.

The reactions differ; some are still excited from the moment of inflation and walk restlessly, occasionally jumping up in an attempt to touch the whale's back; others have become wide-eyed and quiet, touching the sides with tentative, wondering hands. Their awe stills, jells into images, into memories that will shape views as yet unheld. After today, these children will never be indifferent to the fate of whales. □

Sarah White is a recent graduate of Virginia Commonwealth University who lives in Richmond.

1991-92 Hunting Season Outlook



Eastern wild turkey; photo by Kraig Haske.

by
Wildlife Division,
VDGIF

Our biologists have looked into their crystal ball and come up with their best predictions for this year's hunting season.

1991 - 1992 Deer Season Forecast

Big changes in deer hunting regulations will mean big opportunities for those Virginia hunters who decide to take advantage of the most liberal deer

hunting regulations since the Department of Game and Inland Fisheries was established 75 years ago.

A fellow once commented that he hunted to feed his body and his soul. This year it looks like there will be ample opportunity to do both. Hunters will have more opportunity to stay in the woods (i.e., two deer daily bag and more time to check your deer) and with increased season bag limits via the bonus deer tags and more "doe days," hunters should be putting more venison in the freezer as well. Virginia deer hunters will not be the only ones to benefit, as the regulations are designed to provide more recreation and control deer numbers.



ern muzzleloader hunter is that he or she may only use the either sex tag for taking an antlered buck during the early black powder season since there are no "doe days" in this special early season.

The early segment of the archery season was extended into the week of early muzzleloader. This is a prime week for whitetail rutting activity and both archers and muzzleloader hunters should enjoy this special week afield. Archers in the southeastern cities of Virginia Beach, Chesapeake and Suffolk (east of the Dismal Swamp line) have been added to the late segment of archery season. The early firearms season (October 1 to November 30) precludes a separate early bow season in that area. Archers may still use the tags from their deer-bear-turkey license as they have in the past. However, bowhunters should note that one of the deer tags now issued on the special archery license is valid for the taking of an antlerless deer only.

Depending on weather, hunter participation, and mast crops, the 1991 deer harvest could top the 200,000 mark. Given our estimated statewide deer herd of 850,000 animals and a 1990 take of 160,411 deer, a harvest of 200,000 deer is not only possible but desirable from a herd management standpoint. However, veteran deer biologist Jack Gwynn, who will be retiring after 35 years of outstanding service, cautions that the 1991 season total will likely fall between last year's mark of 160,411 and the 200,000 mentioned above. Gwynn looks for a harvest of approximately 180,000 deer this season.

Black Bear by Biologist Dennis Martin, Bear Project Leader

Virginia's black bear harvest decreased during the 1990 hunting season after six straight years of record harvest, from 625 in 1989 to 314 in 1990, for a drop of 48%. The reduction was experienced throughout most of the areas open to bear hunting. Page County lead the state with 43 bears followed by Augusta (38), Rockingham (25) and Albemarle (24). The percent females

taken increased to 43.3%, the highest since 1974 when it was 49.5%. The percentage of sows in the harvest for 1990 was, however, very similar to that found in 1985 seasons (43.2%), 1984 (40.9%), 1981 (41.2%) and 1975 (40.1%), and is not considered excessively high.

Bowhunters accounted for nearly 37% of all bears taken during the 1990 season and given that more female bears are available early in the fall, this contributed to the higher take of sows noted in the 1990 season.

With early indications of a much improved mast crop, there is a potential for more bears to den later this fall and thus remain more available to the hunter. However, given all of the variables, no real change is expected from harvest levels experienced last year.

Wild Turkey by Biologist Gary Norman, Wild Turkey Project Leader

Old Dominion turkey hunters enjoyed a banner year during the 1990-91 license year with a combined fall and spring total of 25,346 birds taken. Unfortunately, turkey nesting success and the survival of poult was well below the average for the past 12 years. Coupled with poor recruitment was an extremely poor mast crop in the fall of 1990. We believe the poor food conditions were largely responsible for the record fall harvest. Lack of mast resulted in turkeys utilizing more open area and were thus more visible and available for hunters. The flip side of the record harvest is that we likely cut into breeding stock, and depending on the 1991 hatch, we may not have as many turkeys "come home to roost" this fall.

Thus, the 1991 wild turkey harvest likely will be below the record level set in 1990 of 16,861 birds. In addition to the possibility of fewer birds, an improved mast crop forecast means that the turkeys we have may be more widely scattered. On the bright side, our research project to monitor wild turkey hens has revealed that so far, the 1991 nesting season has been better than last season and that good numbers of broods have been reported. While an exceptionally good produc-

Another major change aimed at increasing the antlerless deer harvest is that the first Saturday of the regular gun season, November 23, will be a "doe day" statewide except in the bucks only counties of southwest Virginia. Additionally, bonus deer permits, sold in a two-tag set, are valid for use in all counties east of the Blue Ridge and in the western counties of Botetourt, Clarke, Frederick and Warren. Hunters should note that one of the bonus deer tags is valid only for an antlerless deer and that antlerless deer may only be taken on the designated either-sex deer hunting days in the various seasons (archery, muzzleloader and general firearms). What this means to the east-

Statewide Deer, Bear, and Fall Turkey Harvest

County	1988-1989			1989-1990			1990-1991		
	Deer	Bear	Turkey	Deer	Bear	Turkey	Deer	Bear	Turkey
Accomack	603	0	0	636	0	24	812	0	0
Albermarle	1598	47	172	2517	44	230	3115	24	304
Alleghany	1225	21	229	1993	23	184	2332	8	338
Amelia	1333	0	161	1712	0	279	2350	0	392
Amherst	1334	15	177	1692	22	302	1981	7	301
Appomattox	690	0	156	753	0	248	916	0	256
Augusta	3285	37	153	3454	55	211	3526	38	224
Bath	3377	19	284	4106	14	308	4430	10	453
Bedford	3020	15	307	3724	17	429	4686	11	595
Bland	1903	3	328	2022	3	315	2457	2	437
Botetourt	2554	48	284	3464	28	466	4569	12	563
Brunswick	1510	0	73	1632	0	211	1903	0	261
Buchanan	0	0	0	28	0	1	3	0	1
Buckingham	1554	0	334	2055	0	359	2549	1	464
Campbell	447	0	118	667	0	209	825	0	223
Caroline	1410	0	281	1548	0	350	2117	0	379
Carroll	836	0	324	913	0	451	1098	0	448
Charles City	850	0	20	855	0	31	1168	0	50
Charlotte	973	0	136	1157	0	180	1804	0	306
Chesapeake	272	10	0	372	0	0	426	4	0
Chesterfield	609	0	17	794	0	67	1099	0	67
Clarke	741	0	22	1065	0	21	1139	0	16
Craig	2268	22	174	3192	19	263	3853	10	361
Culpeper	933	0	104	899	0	95	1231	0	111
Cumberland	1392	0	232	1740	0	352	2275	2	401
Dickenson	0	0	0	5	0	2	1	0	0
Dinwiddie	872	0	166	1263	0	227	1393	0	282
Essex	413	0	90	489	0	85	591	0	136
Fairfax	223	0	1	383	0	0	461	0	4
Fauquier	2226	0	99	2702	0	80	3250	0	116
Floyd	830	0	161	1019	0	262	1249	0	268
Fluvanna	1071	0	176	1445	0	224	1817	0	247
Franklin	1377	0	311	1891	0	386	2159	1	431
Frederick	2055	0	220	2665	0	85	2957	0	190
Giles	1931	0	285	2122	10	353	2811	8	494
Gloucester	406	0	0	410	0	30	532	1	37
Goochland	827	0	113	902	0	192	1068	0	184
Grayson	3139	0	313	3321	0	307	3712	0	426
Greene	145	24	16	205	20	29	298	7	51
Greenville	1118	0	27	1134	0	24	1286	0	18
Halifax	1295	0	266	1376	0	349	1897	0	401
Hanover	551	0	93	544	0	186	693	0	199
Henrico	407	0	12	523	0	21	620	0	33
Henry	705	0	40	1076	0	93	1129	0	74
Highland	2544	17	150	3157	21	151	3881	4	247
Isle of Wight	1791	0	0	1723	0	7	1854	0	1
James City	401	0	0	577	0	6	715	0	2
King and Queen	871	0	196	998	0	241	1054	0	236
King George	968	0	11	1004	0	13	1254	0	15
King William	802	0	142	904	0	228	1301	0	263
Lancaster	545	0	2	488	0	12	458	0	6
Lee	398	0	102	440	0	100	506	0	89
Loudoun	2607	0	25	3371	0	47	3872	1	67
Louisa	668	0	140	915	0	207	1227	1	272
Lunenburg	863	0	106	1074	0	116	1393	0	154
Madison	401	48	49	533	38	77	627	18	87
Mathews	129	0	0	95	0	0	144	0	3
Mecklenburg	861	0	13	1032	0	87	1351	0	103
Middlesex	116	0	15	289	0	28	210	0	11
Montgomery	1250	0	173	1437	5	214	1851	5	259
Nelson	812	39	103	1144	38	193	1447	6	224
New Kent	904	0	37	856	0	60	1185	0	63
Newport News, Hampton	199	0	0	243	0	9	244	0	7
Northampton	310	0	0	488	0	1	544	0	0
Northumberland	534	0	6	587	0	20	686	0	10
Nottoway	1063	0	96	1257	0	177	1536	0	160
Orange	630	0	63	759	0	96	1145	0	117
Page	934	47	48	1015	52	21	1185	44	44
Patrick	840	0	116	1227	0	159	1427	0	209
Pittsylvania	2671	0	209	3416	0	363	3761	1	447
Powhatan	1587	0	126	1841	0	188	2360	0	225
Prince Edward	1333	0	149	1729	0	274	2037	0	342
Prince George	1209	0	82	1350	0	41	1530	0	68
Prince William	480	0	35	799	0	30	1064	0	25
Pulaski	1036	1	133	1205	0	202	1432	1	220
Rappahannock	1667	31	58	1756	47	43	1486	14	94
Richmond	652	0	7	672	0	25	880	0	19
Roanoke	415	6	45	356	9	71	609	0	99
Rockbridge	2349	24	206	2809	35	244	3297	13	309
Rockingham	3342	36	126	3276	79	80	4132	25	107
Russell	184	2	39	283	2	58	301	0	60
Scott	559	0	153	634	0	141	757	0	180
Shenandoah	3088	23	209	3058	15	124	3385	17	238
Smyth	1400	1	214	1565	1	184	1609	2	224
Southampton	4978	0	0	4363	0	10	4822	0	7
Spotsylvania	229	0	71	469	0	84	724	1	115
Stafford	674	0	58	752	0	96	1015	0	62
Suffolk	1189	15	0	1013	0	4	1477	3	3
Surry	1872	0	25	1981	0	13	2007	0	32
Sussex	2149	0	47	2677	5	77	2435	0	82
Tazewell	554	5	99	624	0	107	694	1	104
Virginia Beach	307	0	0	261	0	0	358	0	0
Warren	1234	8	61	1898	22	54	1534	18	27
Washington	459	1	67	600	1	78	668	1	128
Westmoreland	686	0	17	699	0	36	870	0	33
Wise	307	0	102	365	0	73	427	0	94
Wythe	1592	4	214	1798	0	239	2344	1	313
York	611	0	3	767	0	13	629	0	9
Totals	114,562	579	10,623	135,094	625	13,743	160,329	323	16,857

tion year for pouls would buffer events of the past, hunters should anticipate seeing less scratching in the leaves this fall. Also, 34 piedmont counties will have a new fall turkey hunting regulation in place putting turkeys off limits during the first week of the firearms deer season. Preliminary results indicate that this same type of change has helped to improve overall turkey numbers in other portions of the state.

The 1991 spring season produced a record total of 8,485 gobblers and lots of reports of excellent quality toms. However, poor production in 1990 means that fewer two-year-old birds will be available in 1992 and a record harvest is not expected. The tidewater area continues to exhibit the greatest population growth with Westmoreland and Richmond Counties considered the "wild turkey capitals" of the Commonwealth.

Ruffed Grouse by Biologist Gary Norman

Last year's population of ruffed grouse appeared to be slightly below the long-term average. Information from hunters on hunting success surveys suggest that the grouse population is at a moderate level. Cooperating grouse hunters flushed an average of 1.03 grouse/hour while hunting. The long-term average flushing rate is slightly higher, 1.05 grouse/hour. A reproduction failure and low population levels were experienced back in 1988-89, but production for the past two years has been excellent.

Reproduction during the 1991 spring/summer season is unknown at this time. Weather and food conditions for the 1991 spring/summer in grouse range have been conducive to good reproductive success, however. Still, reports of grouse broods have been spotty and difficult to interpret. There is a good news/bad news scenario with fall food conditions for grouse. The bad news is that grouse hunters may be faced with a difficult task of locating grouse this fall with the general abundance and diversity of foods available to grouse. The good news is that with an abundance of foods, grouse will winter in better conditions and reproductive success may

be enhanced with better physical condition of hen grouse. Hunters interested in participating in Wildlife Division surveys for ruffed grouse and woodcock should contact Gary Norman, VDGIF, Route 1, Box 243A, Mt. Sidney, VA 24467.

Bobwhite Quail by Biologist Mike Fies, Small Game Research

Most quail hunters throughout Virginia reported reduced hunter success during the 1990-91 season. Statewide, the number of quail bagged per hunter hour averaged .038, down 5% from the previous year. The tidewater region, which historically has been the area of greatest quail abundance, experienced the largest decline in hunter success (down 15%). Improved hunter success was reported in the east piedmont and west piedmont regions. Age data from quail wings donated by sportsmen suggest that hunter success was greatest in areas that experienced an "early" hatch.

Statewide hunter success for the 1991-92 season is expected to be very similar to last year. The number of

quail heard calling this spring is unchanged in the tidewater region and slightly reduced in the east piedmont area. Hunter success in the west piedmont region will probably decline this year. A mild winter has resulted in excellent carryover from the previous fall in all regions. However, drier than normal nesting conditions may result in an average or below average hatch this year. So far, rainfall amounts have been barely adequate. If drought conditions occur later in the summer, late-nesting quail will be affected.

Squirrels by Biologist Mike Fies, Small Game Research

Squirrel hunters throughout most of Virginia should expect to find considerably fewer squirrels this season. Following several "boom" years of acorn abundance, squirrel populations have plummeted in response to last year's acorn crop failure. Good soft mast production (grapes, dogwood, etc.) helped carry over squirrels in some areas, but was not sufficient enough to support the large number of squirrels in most regions. As a result of food

shortages, reproduction was drastically reduced this past spring, and squirrel numbers are much lower than they were a year ago. A few areas were spared, however, particularly in eastern Virginia, where hard mast (acorns, hickory nuts, etc.) production was adequate and squirrel populations remained stable.

Although squirrels will generally be fewer in number, sportsmen can look forward to more squirrel hunting opportunities during the 1991-92 season. Squirrel regulations were changed this past year so that hunters in all regions would have the opportunity to hunt squirrels "early" (prior to November). In those counties with a tradition of September squirrel hunting (southern Virginia), the season will open on the first Saturday in September and will not close until January 31. The season for the remainder of the state will run from the second Saturday in October through January 31.

For those sportsmen wishing to harvest a fox squirrel, populations of this species are highest in Augusta, Bland, Highland, Tazewell, and Wythe counties. Moderate populations of fox



White-tailed buck; photo by Lloyd B. Hill.

squirrels also occur in Bath, Rockbridge, Rockingham, Smyth, and Washington counties.

Mourning Doves by Biologist Gary Norman

The planting and harvesting of small grain crops in Virginia are near normal with the exception of the southeast and northwest regions where rainfall levels have been below normal. Population estimates of Virginia doves suggest a stable population between 1990 and 1991. Virginia dove hunters can expect good populations levels and should note the new season framework which provides for three segments in the dove season, in an attempt to take advantage of locally produced and migrating mourning dove populations.

Rabbits by Biologist Mike Fies, Small Game Research

Rabbit hunting prospects for the 1991-92 season appear to be very good. A mild winter and early spring provided conditions favorable for early nesting and reproduction. Many young rabbits have been observed in all regions of the state. More recently, unusually hot and dry weather has slowed the production of later litters, but should not greatly affect fall population levels. Last season, rabbit hunters reported finding good to excellent cottontail numbers. Preliminary indications are that this season should be almost as good. Rabbit hunters should keep in mind that populations are often very localized and that hunter success is dependent upon locating suitable habitat. Public areas should be hunted early before intense hunting pressure makes rabbits more difficult to find.

Woodcock by Biologist Gary Norman

Populations of American woodcock are apparently responding favorably to restrictions in season length and bag limits imposed by the U.S. Fish and Wildlife Service back in 1985. Trends in spring breeding populations in the Eastern Management Unit suggest that the population has

apparently stabilized since 1985. The population response to the regulations restrictions and recent interest and efforts by federal, state and private to maintain and create woodcock habitat are reasons for optimism for woodcock.

Woodcock hunters should watch for cold fronts that serve to initiate "flights" of these migratory birds. VDGIF has chosen a split season framework for woodcock with early season dates of November 4 - November 30 and a late season segment of December 18 January 4. Typically, mountain hunters will find migration peaks during the first two weeks of the season. Piedmont hunters will probably enjoy hunting throughout the early season and the early part of the late segment. Tidewater hunters typically find migration peaking later in the early segment and the late segment.

Waterfowl by Biologist Gary Costanzo, Waterfowl Research Biologist

Virginia hunters enjoyed an average waterfowl season in 1990. The estimated total duck harvest for the Atlantic Flyway was down 8 percent in 1990 as compared to 1989 (U. S. Fish and Wildlife Service Harvest Survey 1991). The estimated duck harvest in Virginia (73,000) was also below that of 1989 (82,000). There was a decline in mallard and black duck harvest in Virginia, 18% and 37% respectively, and an increase in the wood duck and green-winged teal harvest, 8% and 31%. The wood duck was the number one duck in the Virginia hunter's bag (21,700 harvested), followed by the mallard (20,000), black duck (7,200), and green-winged teal (5,400). The Canada goose harvest in Virginia was back down to 9-10,000 birds, similar to 1988, after the second highest harvest ever in 1989, 19,000 geese. As in the first two years of the limited tundra swan season, swan hunting permits were issued to 600 applicants in 1990 and the season limit was 1 swan. In 1990, 145 swans were taken.

Habitat conditions and breeding pair surveys from this spring suggest that the fall flight in 1991 will be similar to or slightly above that of 1990. In

early summer, with above average rainfall in portions of prairie Canada, and in Montana and South Dakota, July pond numbers were at an all-time high in some areas. However, many of the newly flooded basins have been converted to agriculture over the past several years, and were devoid of any nesting cover.

The breeding population estimate for all ducks in 1991 (26.5 million) was slightly improved over 1990 (24.8 million), but is still 19% below the long-term average. Breeding population estimates for mallard, black duck, gadwall, wigeon, green-winged teal, and shoveler were all similar to or slightly improved over last year. The breeding population estimates for blue-winged teal and scaup, which were at all-time lows last year, were improved, but are still 10% below long-term averages. The estimate for pintails fell another 20% from last year to a new all-time low. Pintail breeding population estimates are now 62% below their long-term average. The dramatic decline in pintail numbers over the last several years has led to specific harvest restrictions by the U. S. Fish and Wildlife Service (USFWS).

The outlook for production and the fall flight forecast for geese is generally good. Although no production surveys were conducted on the Quebec breeding grounds, an early to average snowmelt in most of arctic Canada should result in a good production of Canada geese. Snow goose and brant production should be at or slightly above average. In Alaska, very wet conditions produced flooding in some areas and may negatively impact some arctic nesting species. However, a good production year is expected for tundra swans and a fall flight similar to last year's is predicted.

In Virginia, water conditions were adequate in spring, but cool weather delayed nesting about a week later than last year. Dry summer conditions reduced the amount of brood habitat and may reduce brood survival. Local waterfowl production will probably be slightly below that of 1990. Waterfowl season lengths and bag limits in Virginia and for the rest of the Atlantic Flyway should be similar to last year's. □

Journal

Running Wild—A Race to Benefit Wildlife

Join the fun! "Running Wild" is a series of 5K and 10K foot races sponsored by the Virginia Department of Game and Inland Fisheries to benefit nongame and endangered species in Virginia. With the help of Athletix, Contel Cellular, Richmond Ford and Safway Scaffolding, a 5K and 10K race has been scheduled at G. Richard Thompson Wildlife Management Area on October 20, located five miles from Winchester. On October 27, a 5K and 10K race will take place on the Powhatan Wildlife Management Area in Powhatan County.

There will be cash awards for the first three overall winners in the male and female categories. Teams and individuals are encouraged to compete. There will be a special "Running Wild Challenge" event for high school track teams. In addition, trophies will be awarded to the team with the three lowest cumulative times in the 5K event. The entry fee for each race is \$20. The entry fee for teams is \$10 per member,

per race. T-shirts will be given to all entries. Registration begins at 8:00 a.m. Races begin at 10:00 a.m. Proceeds from these races will benefit the Department of Game and Inland Fisheries' Nongame Wildlife Fund. For more information, please contact Ed Phillips at Classic Productions, Inc., P.O. Box 1687, Midlothian, VA 23113, 804/744-5969. □

Virginia Open Team Pheasant Championship

The Oakland Farm Shooting Preserve in Orange County will hold its annual open team pheasant championship on November 8, 9, and 10. Designed to test the shooting skills of the hunter and the bird finding and retrieving skills of trained bird dogs, two-hunter teams and single hunters with their dogs will find, shoot, and retrieve six pen-raised birds against a 30-minute clock. Scoring is based on the number of birds bagged, the number of shells used, and the time elapsed. Prizes will be awarded to the top three teams.

Bird hunters and their prized bird dogs are invited to enter this event. Dave Pomfret, proprietor of Oakland Farms, will accept entries to the event until 8 p.m. on November 5. For information and registration materials, contact Dave Pomfret at P.O. Box 1265, Orange, VA 22960, or call him at 703/854-4540. □

Letters

I have just read the August issue of *Virginia Wildlife* and was delighted with the article and photographs of the butterflies. While I get a lot of butterflies in my yard, I am unable to photograph them as they do not stay still long enough for a picture shot. In a future issue could you arrange for someone to give us a few tips on how to do this? Your Photo Tips section is always helpful.

D. Campbell,
Bluemont.

Thanks for the compliments on our August magazine. We'll try to give you some tips on photographing butterflies in a future issue—be on the lookout for it!—Editor.

Running Wild



My new Virginia Wildlife (August 91) issue arrived and it is beautiful, as usual. I have a "butterfly" bush and last night it was literally covered with butterflies. I have only had the plant 2 seasons and wanted such a plant to enjoy the scenes your pictures featured.

Margret Swartz,
Fairfax.

I just received the August copy of Virginia Wildlife, of which I have been a subscriber for about 30 years and give copies to my friends (10) each year.

On page 27 (August '91) there was a picture of my father on horseback and the game warden was checking his hunting license—in about 1950-1960. His name was Charles Green Turner, Sr. and was master of Foxhounds"—Orange County Hunt," The Plains, Fauquier County from 1952 to 1971. This picture was taken in Fauquier near the Plains. We think the warden was Gordon Wilks.

My father was a farmer and real estate broker. He died in 1980. I thought you would be interested.

We like your publication very much. Keep up the good work!

Charles G. Turner,
The Plains.

Thank you for the information—
Editor

I recently purchased a lovely bluebird feeder "for my husband" and now find myself in need of bluebird food. Though I know bluebird food can be purchased from mail-order catalogs, I find it is very expensive. Should you or your readers have a recipe for bluebird mix, I would surely appreciate having it! And so would our bluebirds!

Margy Smith
Bluefield, WV

Any suggestions from our readers??!!—
Editor

I enjoy so much Joan Cone's recipes in Virginia Wildlife. Have you ever thought of compiling the recipes into a very interesting cookbook? It would make a wonderful gift as well as

a treasured cookbook to add to any cookbook collection.

Ann Marie Thamm
Woodbridge

You're in luck! Joan Cone will have a new cookbook out soon entitled Easy Fish and Game Cooking. It will feature over 175 recipes in a spiral-bound format for \$9.95 plus tax and shipping. Write to: EPM Publications, Box 490, McLean, VA 22101 or call them toll-free at 1-800-289-2339.

This is truly the best magazine I subscribe to. Keep up the good work. Thanks.

Mary Wilson
Sandston

Toll-free Number Discontinued

Unfortunately, due to budget cuts, the Department of Game and Inland Fisheries has been forced to disconnect its toll-free general information number. You can still reach the Department by calling 804/367-1000. To report game and fish violations, however, the

toll-free P.H.O.N.E. line is still open 24-hours a day at 1-800-237-5712. □

Sporting Clays—A Shooting Adventure

The Virginia Department of Game and Inland Fisheries operates a public sporting clays course at Amelia Wildlife Management Area, 30 miles west of Richmond. This challenging 50-round course consists of 11 shooting stations that simulate real upland game and waterfowl hunting situations. The course is open on Fridays, Saturdays and Sundays by appointment only. For information and reservations, call 804/367-1000.

In addition, a new 50-round sporting clays range has opened on Shirley Plantation halfway between Richmond and Williamsburg off Route 5. Operated by Charles and Randy Carter, the Charles City Clays Hunting Club, Inc. is a member-based operation open on Thursdays, Fridays, Saturdays and Sundays by appointment only. Contact Charles Carter, Charles City Clays Hunting Club, Inc. at 501 Shirley Plantation Road, Charles City, VA 23030, 804/829-6270 for more information.



Try sporting clays this fall—it's guaranteed to sharpen your wingshooting skills! Photo by Virginia Shepherd.



Winter Comfort
By
Bob Henley

Bring Home a Little *Winter Comfort* This Holiday Season

FOUR WAYS TO GET BOB HENLEY'S
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- 1) Send us a check for \$45.
- 2) Buy 2 or more subscriptions to *Virginia Wildlife* and send us \$35.
- 3) Buy 5 or more subscriptions to *Virginia Wildlife* and send us \$25.

4) Buy 10 or more subscriptions to *Virginia Wildlife* (for \$6 each!) and send us \$25.

COMPLIMENTS OF VIRGINIA WILDLIFE

See gray card in this magazine for order form, or simply send in your list of gift subscriptions and specify the number of prints ordered with a check made out to the Treasurer of Virginia to: *Virginia Wildlife*, P.O. Box 11104, Richmond, VA 23230-1104.

Take Your Camera on an Underwater Journey

by Lynda Richardson

I held my breath. The little fish swam back and forth before my eyes. Their scales flickered brilliant red, green and blue in the filtered light of a hot, noon-day sun. They hovered peacefully among the aquatic plants, staring while I composed my picture. As one fish drifted slowly out of the greenery, I released the shutter, firing off several frames at different exposures. Getting the shot, I began to breathe again.

Suddenly, I felt a stinging sensation on my hand. I set the camera down and smacked the mosquito on my ring finger. My quick movement startled the fish and they began to dart around in flashes of color. I grabbed the camera for more shots. With my homemade "squeeze tank," I was staying dry and getting great, natural-looking, underwater shots of fish while sitting at a friend's backyard picnic table.

Not all underwater photographs are taken by placing cameras underwater. Shy subjects, water clarity or strong currents sometimes create the need to find other ways to photograph underwater subjects. Oftentimes, glass aquariums and squeeze tanks are used to get these shots.

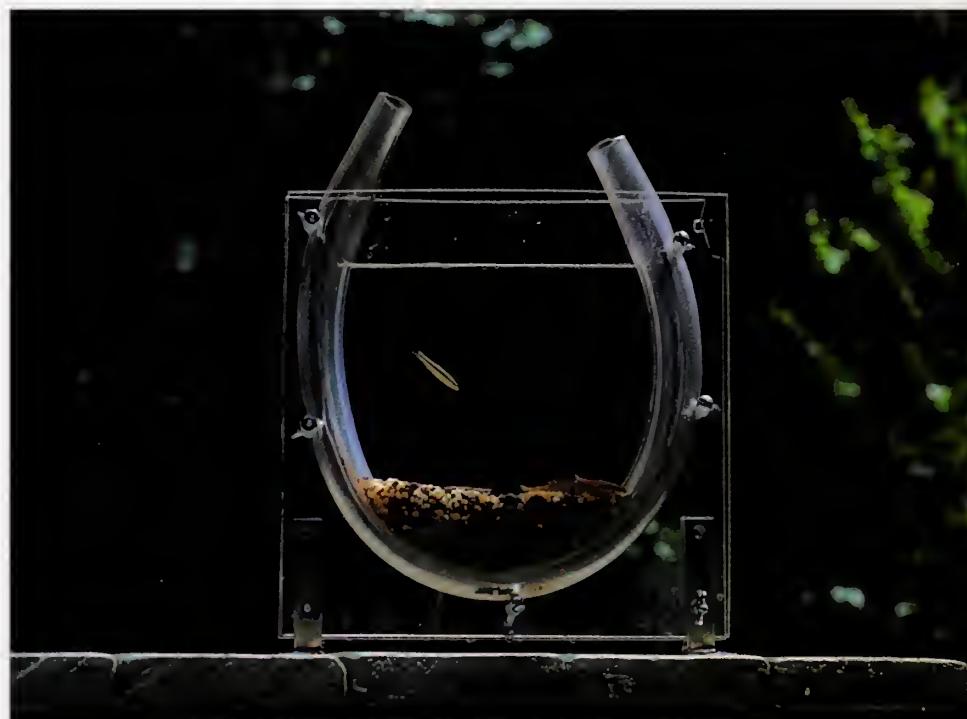
A squeeze tank is just a flattened aquarium made with plexiglass. Being plastic instead of glass, your squeeze tank won't break if you drop or knock it over, making it ideal for field work. Size for size, it's usually lighter than a glass aquarium, it won't cut your hands, it can be carried in a suitcase, and you can make in less than five minutes once you have the parts. There are several ways to make a squeeze tank, but here is the easiest way I've found. All you need

is access to a drill and the following items:

- 1) Two pieces of 1/8th inch plexiglass cut to your pre-determined size.
- 2) One piece of clear plastic tubing long enough to create a horseshoe with in the two pieces of plexiglass.
- 3) Four to eight screws with wing-nuts to bind everything together.
- 4) Four "L" brackets to make the unit free standing.

Before you build your underwater set, decide what you want to photograph. Then, create a tank big enough to get shots of the whole animal without getting the sides of the tank in the

picture, but small enough so the animal doesn't end up zooming around. A good "all purpose" size to start with would be approximately 12 inches by 12 inches. In this size tank, I have photographed Lesser Siren, Red-Spotted Newts and several types of small fish. Your plastic tubing should be approximately 1 inch wide and the screws 2 to 2 1/2 inches long. The L brackets would be 3 1/2 inches per side. Once you gather the parts, all you have to do is place the tubing between the two pieces of plexiglass fairly close to the plexi edges and screw holes. Then, just screw the thing together placing the "L"



With the portable squeeze tank, you can go to a stream, catch a minnow, photograph it, and return it to the water unharmed within 15 minutes.



This colorful Flagfish (*Jordanella floridae*), which lives in the Florida Everglades, posed beautifully in my squeeze tank on the picnic table.

brackets on the bottom as feet. When the screws are tight, the tubing acts as an o-ring sealing the water into the tank. If you have leaks, just tighten the screws or check for sand and grit where the tubing touches the plexiglass.

Now you're ready for something in the tank. Place clean gravel or sand in the bottom being careful not to scratch the sides. Plexiglass scratches easily and these scratches will show up in your photographs. Sometimes I use a piece of paper to slide gravel down the plexi sides to the bottom. Then, pour in water from your subject's home or use tap water that has set out for twenty-four hours to give the bubbles and chlorine time to dissipate.

For subjects, I recommend starting with something simple like the aquatic version of the Red-Spotted Newt. Newts are slow and will rest peacefully in a bit of vegetation giving plenty of time for composing shots. Using a wooden chopstick, you can gently move a weed out of its face or uncurl its tail. And once you've finished with your subject, release him immediately

in the same spot you found him. With the portable squeeze tank, you can go to a stream, catch a minnow, photograph it, and return it to the water within fifteen minutes time, unharmed.

Before you go out looking for subjects, check state game and nongame laws regarding aquatic life. There are many varieties of endangered creatures in Virginia waters, so find out what these are so you can avoid them. When you're out in the field capturing subjects, be sure to use great care. Handling fish can remove the protective slim from their bodies making them susceptible to disease. Also, if you place too many critters in your tank or leave them in it overnight, they can run out of oxygen and die.

Here's a few tips when using your squeeze tank: Shoot in the noonday sun. This strong light source will create natural looking light from above, will be strong enough to allow for good depth of field and so high that it will not reflect on the sides of your tank.

Reflections of yourself and objects around you can be a problem. I wear

dark clothing and shoot with black equipment. Bits of black tape can be used to hide reflections from tripod legs or cameras. Also, I try to position my camera at slight angles to the tank while watching for reflections. If that doesn't work for you, get a piece of black felt, cut a hole for your camera lens, and throw it over your head to shoot through. I usually shoot with a 100mm macro lens, but backing away from the tank with a lens such as a 200mm with an extension tube may lessen reflections. You can also use a polarizing filter.

As far as backgrounds go, try setting your tank so there is a shady area with vegetation in the background. Because of the exposure differences between your tank and the shade, you will have a dark background. If the background vegetation does show up, it will usually look like underwater plants.

So this fall, build a squeeze tank and explore the watery world around you. Take your camera on an underwater journey! □

Habitat

Osage Orange

by Nancy Hugo

The osage orange is the official fruit of one of my husband's professional groups, i.e. his poker club. Every year, before their annual October meeting, these men must find an osage orange fruit to signal the start of the games. Unlucky is the year the fruits are late or scarce, because then somebody has to stand under a tree and shake it, hoping one of these grapefruit-sized fruits lands somewhere other than on his head. Ah, the rigors of attending professional meetings!

It's easy to understand why the osage orange first attracted these guys' attention. The heavy yellow green fruits have a strange furrowed surface that looks like the surface of a brain. So unusual looking are these warty orbs that no one can resist picking them up, and I've never seen an osage orange I didn't want to do something with. Kids throw them. Who can blame them? Adults take them in the house and put them in bowls on kitchen tables until they've exhausted their novelty value, shriveled up, or rotted, whichever comes first.

But osage oranges were once much more than curiosities. In the 19th century, osage orange trees were used as living fences. Because their branches are thorny and the trees send up lots of shoots from the roots when pruned, they form almost impenetrable hedges. Thousands of miles of osage orange fences were planted in the Midwest, East, and South, but they were especially valued in the grassland plains where wood was scarce. Billed as "the fence that builds itself," they were reputed to grow fast and thick enough in a few years to form a barrier "tight enough to hold water." I have a wonderful old 1868 Department of Agriculture Report that devotes an entire chapter to how to plant and maintain an osage orange fence, including how to cross

and plait the saplings so they grow to form an impenetrable barrier.

The invention of barbed wire in 1875 ended the heyday of osage orange fencing, but osage oranges had been let out of the gate. The trees' original native range was very narrow—from



Osage orange fruit; photo by Nancy Hugo.

southwestern Arkansas to southeastern Oklahoma and east Texas, but, widely planted outside their native range, they've now naturalized in eastern, southern, and northwestern parts of the country. In Virginia you'll find osage oranges on old homesites, in fencerows, and in pastures and thickets. In hedges they're usually only about 20-30 feet tall, but they can grow to 60 feet. The tree's shiny, dark green leaves are oval narrowing to a point, and they're 3-5" long. Only female trees bear fruit.

Although squirrels and bobwhites occasionally eat the seeds of osage orange fruit, the primary value of the osage orange to wildlife lies not in its food value but in the habitat it provides. As you can imagine, a tree whose thorny, tangled branches make it a wonderful fence also provides cover

and shelter for wildlife. Hedgerows of osage orange may turn back cattle, but they invite nesting birds to move in. "A tougher more tangled, thornier bundle of arboreal catankerousness would be hard to find," wrote one man who spent his boyhood summers clearing brush and cutting fence posts out of an osage orange hedge, and I can almost hear the cardinals whistling while he worked.

The osage (pronounced oh-sage) orange was named by French explorers for the Osage Indians who lived in an area similar to the tree's original range. Native Americans used the tree's strong resilient wood for bows (hence its French name "bois d'arc"). Other common names for the osage orange are bowwood, yellowwood, hedge apple, prairie hedge, and horse apple. Yellowwood refers to the deep yellow heartwood of the tree. I'm not sure of the derivation of horse apple, although I've been told that both horses and cattle will eat osage oranges if they get hungry enough. Tough and rot resistant, osage orange wood has been used to make wagon wheels, fence posts, and garden furniture. A yellow dye can be derived from osage orange root bark, and Native Americans used the tree's inner bark to make rope.

The osage orange, *Maclura pomifera*, is the sole surviving member of its genus, and it's a durable, easy-to-grow tree. Seedlings don't mind being transplanted, and, according to one expert, the poorer the site you give them, the better. They'll withstand wetness, dryness, wind, and extreme heat, but they do want full sun. My husband planted some 14" seedlings on our property last year (he got them from Musser Forests, Inc., P.O. Box 340, Indiana, PA 15701 for about \$1.00 each), and they seem to be doing fine in unforgiving red clay. They're supposed to grow fast (9-12' in three to five years), so we should have prickly hiding places for our birds and osage oranges to open our professional meetings before you know it. □

Recipes

Dining on Pheasant

by Joan Cone

In Virginia pheasants are mainly available on shooting preserves. These pheasants, as those in the wild, are excellent to eat but can be difficult to cook. The reason for this is that pheasants, unlike domestic fowl, have very little if any fat, and the result is they can become dry when cooked. You should not try and open roast a pheasant like a store bought chicken, but keep them covered and moist during cooking. This can be accomplished by using a covered Dutch oven, aluminum foil, or Oven Cooking Bags. Most pheasants, which average a little over two pounds, will be done with 1 1/4 to 1 1/2 hours of cooking time.

Menu:

- Olive-Pecan Hors d'Oeuvres
- Pheasant Oriental
- Creamed Potatoes and Peas
- Cranberry Yogurt Salad
- Albanian Walnut Cake with Lemon Glaze

Olive-Pecan Hors d'Oeuvres

Mix equal amounts of chopped black olives and finely chopped pecans with a small amount of mayonnaise. Add a dash of hot pepper sauce. Place mixture on small bread triangles.

Pheasant Oriental

1 tablespoon flour
1 large or 2 small pheasants, cut up
Paprika
1/4 cup soy sauce
2 tablespoons honey
1/2 teaspoon ground ginger
1/4 teaspoon garlic powder
1 can (4 ounces) sliced mushrooms, drained
1/3 cup water chestnuts, sliced

Shake flour in a large size (14" x 20") Oven Cooking Bag and place in a 2-inch deep roasting pan. Season pheasant pieces with paprika and place in bag. In a small bowl, combine soy sauce, honey, ginger and garlic powder; pour over pheasant in bag. Add mushrooms and water chestnuts to bag. Close bag with twist tie. Marinate in refrigerator 6 to 8 hours or overnight; turn bag once. When ready to cook, make six 1/2-inch slits in top of bag. Cook in a 350 degree oven for 1 to 1 1/4 hours or until pheasant is tender. Serve sauce over birds. One large pheasant serves 3.

Creamed Potatoes and Peas

3 cups sliced, raw potatoes
1 pkg. (10 ounces) frozen peas
3 tablespoons margarine or butter
3 tablespoons flour
2 cups milk
1 teaspoon salt
1 teaspoon paprika
1 teaspoon celery seed

In a 2-quart baking dish, alternate layers of potatoes and peas. Melt margarine in medium sauce pan and blend in flour. Add milk gradually, stirring constantly until thickened. Add salt, paprika and celery seed; pour over vegetables. Bake in a 350 degree oven for 1 hour. Serves 4 to 6.

Cranberry Yogurt Salad

1 envelope unflavored gelatin
1 tablespoon sugar
1 cup cranberry juice
2 cartons (6 ounces each) custard style raspberry yogurt
1 can (16 ounces) whole cranberry sauce
3/4 cup coarsely chopped walnuts

Mix gelatin and sugar in large bowl. Heat cranberry juice to boiling; stir into gelatin mixture until dissolved. Stir in yogurt and cranberry sauce. Fold in walnuts. Pour into a 6 1/2 cup ring mold. Refrigerate until firm, at least 3 hours. Serves 8.

*Albanian Walnut Cake With Lemon Glaze

1/2 cup butter, at room temperature
3/4 cup sugar
2 eggs, lightly beaten
1/3 cup plain yogurt
1/3 cup buttermilk (or additional 1/3 cup yogurt)
2 cups unbleached white flour
1 teaspoon baking powder
1 teaspoon baking soda
1/2 teaspoon cinnamon
1 tablespoon freshly grated lemon rind
1 cup walnuts, toasted and finely chopped

Glaze

3/4 cup water
1 cup sugar
1 cinnamon stick (or 1/2 teaspoon ground cinnamon)
1/4 cup fresh lemon juice
1/4 teaspoon ground allspice
Dash of ground cloves

Preheat oven to 350 degrees. For the cake, cream together the butter and sugar until light and fluffy and then mix in the eggs. Blend in the yogurt with buttermilk. Sift together the dry ingredients and add them alternately with the yogurt mixture into the egg mixture. Stir in the lemon rind and walnuts. Pour the batter into a buttered 9 x 13-inch baking pan and bake for 30 to 40 minutes, until a toothpick inserted in the center comes out mostly clean. The cake should still be moist.

Meanwhile, make the glaze by simmering all the ingredients, covered, for about 15 minutes. Remove the cinnamon stick. When the cake is done, remove it from the oven, turn the oven off, pour the glaze over the hot cake, and return it to the oven for about 10 minutes. Cut the cake into squares and serve it warm or cool. Yields 12 to 15 servings.

* Recipe from *Sundays at Moosewood Restaurant: Ethnic and Regional Recipes from the Cooks at the Legendary Restaurant* (Fireside/Simon & Schuster, 1990). □

Safety

Virginia Boating Gets Help

by

William Antozzi, Boating Safety Officer

Virginia boaters enjoy the waterways of a wet state. A Virginia drainage map shows so many waterways that the diversity of size and types result in a richness of boating opportunities which can provide enjoyment for all. We have the Atlantic Ocean, Chesapeake Bay, huge man-made lakes, beautiful natural lakes, and extensive river systems. Boaters can enjoy cruising, fishing, racing, water-skiing, tubing, swimming and relaxing.

Unfortunately U.S. Coast Guard reports for last year show figures which reveal that boating is a dangerous type of recreation. Nationally there were 5,700 accidents involving 7,510 vessels with almost 20 million dollars property damage. Nearly 2,000 boaters were seriously injured and well over a thousand lives were lost. When we contemplate those figures we should remember that there are about 19 million registered recreational vessels in the United States. The Coast Guard figures an average of two and a half passengers per boat, which results in a count of nearly 48 million recreational boaters in the country who use registered recreational boats. Added to that figure are the millions who use unregistered vessels, such as canoes, kayaks, motorless sailboats and rowboats. There is a total of 75 million Americans who enjoy recreational boating, according to the National Association of Marine Manufacturers.

Virginia boating accident reports for calendar year 1990 showed 135 accidents, 75 injuries and 23 fatalities. Not bad for a state with a boating population of over a million, 202,000 registered boats, about 100,000 non-registered boats and approximately 40,000 visiting boats. Despite a constant increase in our boating population, our accident statistics have been at about

the same level for the past decade.

Virginia's boating education programs certainly play a big part in the good boating safety record. About 14,000 people have benefitted from basic boating courses during the past 12 months. Courses have been run at night for adults, and instructors have been welcomed into the public and private schools for boating education. Virginians can take the free six-lesson State Boating Basics courses, those offered by the U. S. Power Squadrons, or the 13-lesson Boating Skills and Seamanship and Sailing and Seamanship courses presented by the U. S. Coast Guard Auxiliary.

One activity that has not been getting the attention it deserves are the free courtesy marine examinations provided by the U. S. Coast Guard Auxiliary. Volunteers examine about 16,000 ves-

sels each year in Virginia. Marine dealers and boating organizations can help boaters by encouraging them to get a free exam. If boats pass the inspections, easily removable stickers are given to the owners. Boaters need not worry about failure to pass, because they are the only ones informed of discrepancies.

Marine dealers can help the safety program by properly mounting fire extinguishers, providing a safety kit with boats sold and providing safe boating literature to their customers. A member of the U. S. Coast Guard Auxiliary will visit marine dealers, if requested, and will provide literature, advice and free boat examinations. Arrangements for that service can be made by calling Charles F. Bernhardt at 804-276-1582 during the week and 804-435-2108 weekends. □



Keep your boating safe this fall-take a boating safety course; photo by Mel White.



Rob Leslie

1991 Virginia Duck Stamp Print—Canvasbacks

Artist: Rob Leslie

Print Specifications:

Artist: Rob Leslie	Signed and Numbered Print
Subject: Canvasbacks	14,500
Edition Size:	Print w/ Medallion 2,450
	Executive Edition 550
	Artist Proof Edition 350

Image Size: 6 1/2" X 9"

Overall size: 12" X 14"

Retail Price:

Print w/ Stamp \$141.00

Print w/ Medallion w/ Stamp 306.00

Executive Edition w/ Medallion

Pencil Remarque, and Stamp 406.00

A/P Edition w/ Medallion

Color Remarque and Stamp 556.00

About the Artist:

Robert Leslie, 38, of Turnersville, N.J. launched his career as a wildlife artist in August 1985. He decided to

make art a full-time profession after competing in two shows and capturing first prize in each. Born and raised in Oconomowoc, Wisconsin, Leslie attributes his love of the outdoors to his father and his creative talents to his mother. His earliest exposure to wildlife was in the forests and marshes of Wisconsin. There he acquired knowledge of the environment that influences his painting today.

"I feel it is necessary for any artist to experience the joys of nature first-hand," says Leslie. "Before picking up a brush, I'll spend as much time with the research, sketching and composition as with the actual painting," he adds. His credits include winning the Delaware Duck Stamp Print in 1986 and again in 1989, 1987 Pennsylvania Duck Stamp Print, 1987 Idaho Duck Stamp Print, 1988 New Jersey Duck Stamp Print, 1989 North Dakota Duck Stamp Print. Other honors include designing the

1990 North Carolina Duck Stamp Print, and the 1991 North Carolina Sportsman's License.

About The Program:

The Virginia Duck Stamp program was created in 1988 to provide additional funds for waterfowl conservation and management in Virginia. The voluntary stamp, available to hunters and other conservationists for \$5, is a collector's item, along with the limited edition prints which were produced to accompany the stamps. This year's duck stamp, featuring the canvasbacks by artist Rob Leslie, and last year's stamp featuring the wood ducks by artist Louis Frisino are available from the Department of Game and Inland Fisheries at 4010 W. Broad St., Richmond, VA 23230-1104, 804/367-1000 for \$5 each. The duck stamp prints of 1988-1991 are available from fine art galleries around the state.

We're fighting for their lives



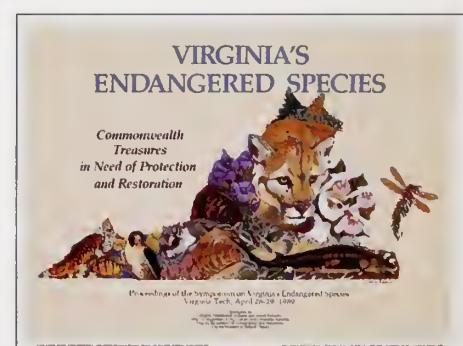
Osprey on nest; photo by Bill Lea.

Many of Virginia's wildlife are in danger. Suffering from habitat loss and the dangers of pollution which threaten their survival, many species in the state are struggling to survive.

The Department of Game and Inland Fisheries is responsible for the protection and conservation of all wildlife in Virginia, but we receive no state tax dollars, and we need your help to do our job. Help us fund critical research and management programs for the state's nongame and endangered species by con-

tributing to our Nongame Wildlife Fund, which is supported solely by voluntary contributions made through our state tax checkoff program and direct giving.

Please use the gray card in back of this magazine to make a donation, or simply send your tax-deductible check (made payable to the Treasurer of Virginia), to: Virginia Nongame Wildlife Fund-VW, Virginia Department of Game and Inland Fisheries, P.O. Box 11104, Richmond, VA 23230-1104.



Virginia's Endangered Species poster is available for \$8, including shipping and handling by writing to: VA Endangered Species Poster Offer, Attn: Diane Davis, VDGIF, P.O. Box 11104, Richmond, VA 23230-1104. Please make checks payable to: Treasurer of VA.



Give Wildlife A Ride

Why not give wildlife a ride by ordering a Wildlife Conservationist license plate from the Department of Motor Vehicles? This brand-new plate, created by the Virginia Department of Game and Inland Fisheries, is designed to generate money for the Game Protection Fund, which is used for wildlife conservation management and research.

Order yours today by filling out the application at the bottom of the page (using the instructions on the opposite page to guide you). Show how much you care for Virginia's wildlife by purchasing a Wildlife Conservationist license plate today!



Application for:

- College/University Plates
 Wildlife Conservationist Plates

Name of College/University (Please Spell Out - No Initials or Abbreviations)

OWNER'S NAME	FIRST	M	LAST	FOR REGULAR PLATES ONLY. <input type="checkbox"/> I DO NOT WISH TO APPLY FOR PERSONALIZED PLATES. SEND THE NEXT AVAILABLE NUMBER ISSUED TO COLLEGE/UNIVERSITY OR WILDLIFE CONSERVATIONIST. THE FEE IS \$25 ANNUALLY.							
SS#/EMPLOYER ID#					FOR PERSONALIZED PLATES ONLY <input type="checkbox"/> I DO WISH TO APPLY FOR PERSONALIZED COLLEGE/UNIVERSITY OR WILDLIFE CONSERVATIONIST PLATES. THE FEE IS \$35 ANNUALLY						
CO-OWNER'S NAME	FIRST	M	LAST	PRINT YOUR PLATE COMBINATION AS YOU WISH IT TO APPEAR ON YOUR LICENSE PLATE. YOU ARE ALLOWED: <ul style="list-style-type: none"> • A MAXIMUM OF TWO TO SIX LETTERS AND/OR NUMBERS. • SPACES, DASHES AND AMPERSAND (&) ARE ALLOWED; HOWEVER THEY ARE CONSIDERED ONE SPACE AND CANNOT BE USED CONSECUTIVELY. NO OTHER PUNCTUATION IS ALLOWED. 							
SS#/EMPLOYER ID#					INDICATE THREE CHOICES IN ORDER OF YOUR PREFERENCE BELOW. IF YOU ARE APPLYING FOR COLLEGE /UNIVERSITY PLATES YOUR COMBINATION WILL BE PLACED ON THE PLATE BASED ON WHERE THE COLLEGE/UNIVERSITY CHOSE TO PLACE THEIR LOGO						
STREET ADDRESS				FIRST CHOICE							
CITY	STATE	ZIP									
CURRENT LIC. PLATE NO.:		EXIRATION DATE:		MO.	YR.	SECOND CHOICE					
TITLE NO.:		TELEPHONE NO.:									
IDENT. NO.:							THIRD CHOICE				
OWNER'S SIGNATURE		DATE									
CO-OWNER'S SIGNATURE		DATE									
DMV USE ONLY: FEE \$				FOR A 'SAMPLE' COLLEGE/UNIVERSITY OR WILDLIFE CONSERVATIONIST PLATE: <input type="checkbox"/> I DESIRE A SAMPLE PLATE \$25 FEE (ONE PLATE WILL BE ISSUED - NOT FOR USE ON MOTOR VEHICLES)							
				RENEW FOR TWO							

